JAN 21 1942

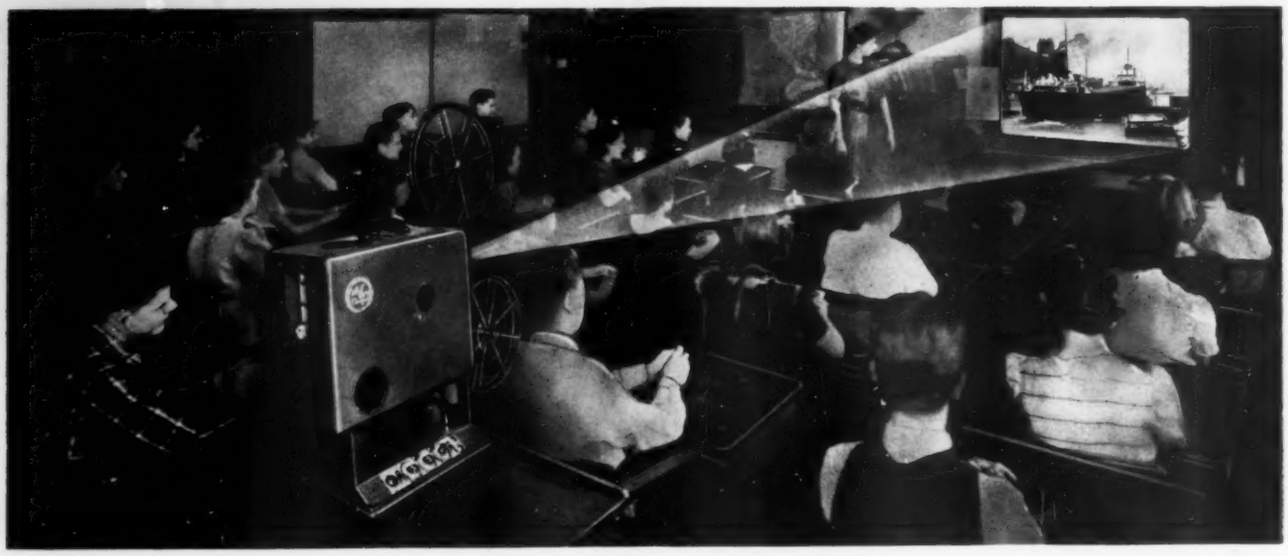
EDUCATIONAL SCREEN

THE MAGAZINE DEVOTED TO AUDIO-VISUAL AIDS IN EDUCATION

25¢ A COPY $2.00 PER YEAR

JANUARY, 1942

DE VRY SOUND PROJECTORS ARE PLAYING A LEADING ROLE IN OUR FULL SPEED TO VICTORY PROGRAM

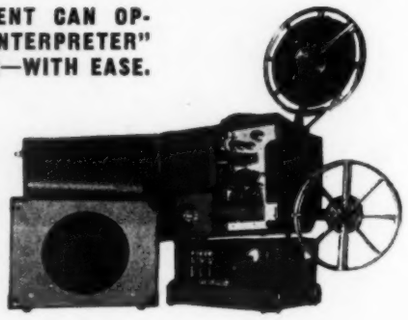


Teach with Sound Films!

A 12 YEAR OLD STUDENT CAN OPERATE THE DE VRY "INTERPRETER" SOUND FILM PROJECTOR—WITH EASE.

Threading is so simple—controls are so handy, it's as easy to operate as a radio. Built of quality materials for long lasting dependable trouble-free service.

Projects Both 16mm. Sound and Silent Films



THE TEACHING MEDIUM OF THE HOUR

Your Government, through the medium of sound motion pictures, is speeding the training of millions of service men and industrial workers in the nation's drive to victory. Sound films are today demonstrating their inestimable value as a teaching medium. Retention by the mind is more lasting, quicker in absorption and valuable time is saved because subjects are made clearer and simpler. Accelerate the learning processes in your school system with sound films—the teaching medium of the hour.

VICTORY DEVRY

NIGHT and DAY For VICTORY

On night and day shifts, DeVry craftsmen maintain increasing efforts to assure production of both 16mm. and 35mm. sound film projectors so vital to the success of our victory program.

HUNDREDS OF DE VRY 35MM. SOUND THEATRE PROJECTORS ARE BEING SUPPLIED TO THE U. S. NAVY AND ARMY AIR CORP.

NEW DEFENSE TRAINING FILMS

AVAILABLE ON RENTAL OR PURCHASE FROM THE DEVRY FILM LIBRARY

Under the guidance of the U. S. Office of Education, more than fifty 16mm. sound film subjects on MACHINE SHOP WORK and INDUSTRIAL TRAINING have been prepared. If your school is offering defense training courses, these films should be a must on your list.

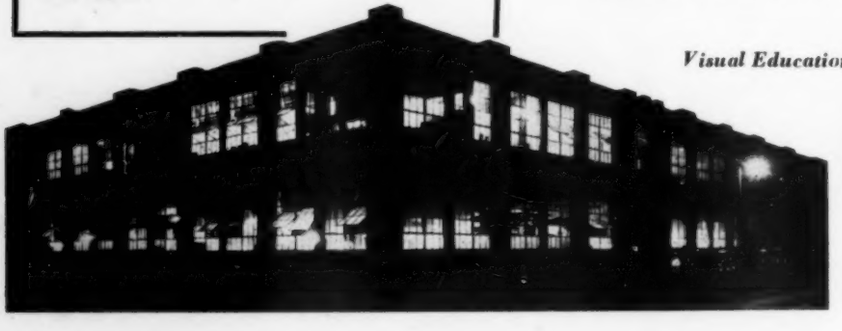
SEND FOR CATALOG — NOW!

FILMS on ELECTRICITY

16mm. sound or silent films. May be purchased by schools participating in National Defense Training with Federal funds. Contact your State Vocational Director.

- Principles of Magnetism
- Principles of Electromagnetism
- Principles of Current Electricity
- Principles of Electrostatics
- Principles of Electrical Measurement
- Principles of Current Generation

Study Outlines Furnished.



Visual Education Headquarters Since 1913

DEVRY CORPORATION

DeVry Films & Laboratories

1111 Armitage Ave., Chicago, Ill.

New York Hollywood

Education Direct

The EDUCATIONAL SCREEN

THE EDUCATIONAL SCREEN
Staff

NELSON L. GREENE - - - *Editor-in-Chief*
EVELYN J. BAKER - *Advertising Manager*
JOSEPHINE HOFFMAN - - *Office Manager*

Department Editors

WILBER EMMERT - - - - Indiana Pa.
HARDY R. FINCH - - Greenwich, Conn.
JAMES D. FINN - - - - Greeley, Colo.
ANN GALE - - - - - - Chicago, Ill.
DAVID GOODMAN - - New York, N. Y.
JOSEPHINE HOFFMAN - - - Chicago, Ill.
F. DEAN MCCLUSKY - Scarborough, N. Y.
ETTA SCHNEIDER - - Washington, D. C.
W. W. WATTENBERG - - - Chicago, Ill.

Editorial Advisory Board

WARD C. BOWEN, Chief, Bureau of Radio and Visual Aids, State Education Department, Albany, N. Y.

MARIAN EVANS, Director, Visual Instruction Center, Public Schools, San Diego, Calif.

W. M. GREGORY, Western Reserve University, Cleveland, Ohio.

J. E. HANSEN, Chief Bureau of Visual Instruction, Extension Division, University of Wisconsin, Madison, Wis.

J. A. HOLLINGER, formerly Director, Department of Science and Visualization, Public Schools, Pittsburgh, Pa.

BOYD B. RAKESTRAW, Assistant Director Extension Division, University of California, Berkeley, Calif.

PAUL C. REED, Director, Department of Radio and Visual Education, Board of Education, Rochester, N. Y.

W. GAYLE STARNES, in charge of Audio-Visual Aids, Department of University Extension, University of Kentucky, Lexington, Ky.

LELIA TROLINGER, Secretary, Bureau of Visual Instruction, Extension Division, University of Colorado, Boulder, Colo.

W. W. WHITTINGHILL, Director, Department of Visual and Radio Education, Board of Education, Detroit, Mich.

VOLUME XXI JANUARY, 1942 NUMBER ONE
WHOLE NUMBER 198

Contents

Cover Picture—Crater Lake National Park
(Courtesy U. S. Department of the Interior)

Diversitorials 6

Audio-Visual Enrichment of the Curriculum ... Anna Curtis Chandler 8

Visual Education in the Air Corps Technical Schools ... Lt. Ned L. Reglein 10

A Radio in the Schoolroom? ... Elizabeth Stadtlander 11

How We Use Motion Pictures in Chemistry Instruction ... Dr. Charles Mason 12

Motion Pictures—Not for Theatres ... Arthur Edwin Krows 14

Committee on Field Experiences ... Conducted by William W. Wattenberg 18

The Literature in Visual Instruction A Monthly Digest ... Conducted by Etta Schneider 20

Light—In Hand-Made Lantern Slides ... Ann Gale 22

Among Ourselves—Notes from and by The Department of Visual Instruction ... Conducted by James D. Finn 23

Pertinent Paragraphs on Perceptual Learning ... Wilber Emmert 26

Experimental Research in Audio-Visual Education David Goodman 30

School-Made Motion Pictures ... Conducted by Hardy R. Finch 32

News and Notes ... Conducted by Josephine Hoffman 34

Current Film News ... 38

Among the Producers ... 42

Here They Are! A Trade Directory for the Visual Field ... 44

SUBSCRIPTION PRICE

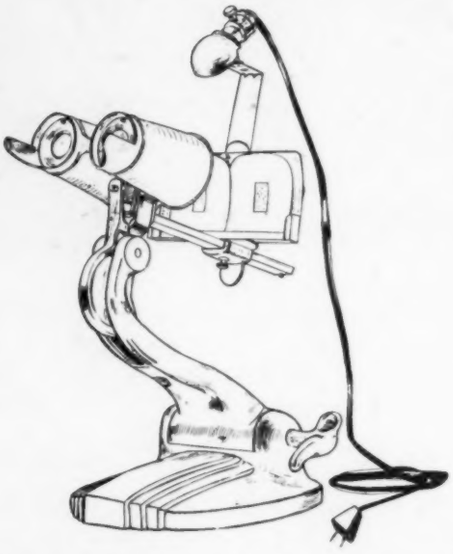
Domestic $2.00
Canada $2.50
Foreign $3.00
Single Copies ..... .25

The EDUCATIONAL SCREEN published monthly except July and August by The Educational Screen, Inc. Publication Office, Pontiac, Illinois; Executive Office, 64 East Lake St., Chicago, Illinois. Entered at the Post Office at Pontiac, Illinois, as Second Class Matter.

Address communications to The Educational Screen, 64 East Lake St., Chicago, Ill.

KEYSTONE *Visual Aids*

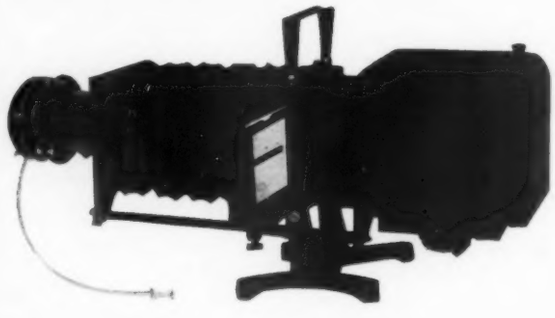
Are Playing an Important Role in the Modern Reading Program



The Keystone Telebinocular Tests—Screen out for reference to the eye specialist many who are held back in their reading by visual handicaps.

"The Keystone Way of Teaching Reading"—A manual by Daisy M. Jones, outlining a program for the use of the lantern and of regular and handmade lantern slides in teaching reading throughout the first year.

The Keystone Flashmeter—An attachment for the Keystone Lantern that has unusual possibilities in regular and remedial work in reading.



There are ample experimental data on the use of each of the three visual-aid items pictured above.

The use of visual aids in the teaching of reading is an attack on one of the most pressing problems in the modern American school.

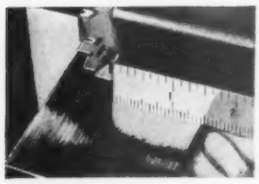
Further information will be sent on request.

Keystone View Company

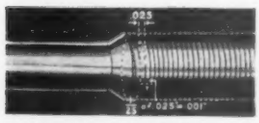
Meadville, Penna.

SPEED DEFENSE WORK with U.S. Office of Education Motion Pictures that help to teach PRECISION MEASUREMENT!

Acclaimed by Educators and Shop Foremen as one of the Greatest Contributions to Shop Training ever made!



THE STEEL RULE. 475 ft. 16 mm. sound. Cost: $11.37. Subject shows in detail the various forms of steel rule in general use, explains fractional scales and demonstrates correct use. Explanation of blueprint dimensions. Variations in form of depth gages and combination squares. The rule measuring round stock.

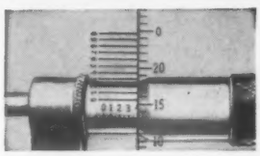


THE MICROMETER. 525 ft. 16 mm. sound. Cost: $12.37. Subject shows various forms of the micrometer. Animation teaches their reading. Emphasizes necessity for checking against known standards. Outside, inside and depth micrometers demonstrated. Correct reading of barrel and thimble scales shown.

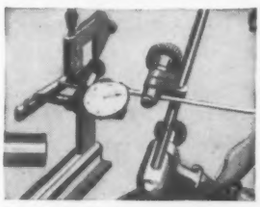
FIXED GAGES. 600 ft. 16 mm. sound. Cost: $13.87. Subject offers demonstration of various types of fixed gages in use. Measurement of outside and inside dimensions, to checking internal and external tapers and to measure threads shown. Go-not-go, flush-pin, taper ring and taper plug gages in use.

COMPLETE GROUP OF 5 SUBJECTS ON PRECISION MEASUREMENT COSTS $61.95

Total footage 2700 feet—16 mm. Sound-on-film. (Prints may be bought separately)



VERNIER SCALE. 675 ft. 16 mm. sound. Cost: $15.37. A detailed study, largely in animation, of principles of the Vernier scale and its application to precision measurement. Both ten and twenty-five part Vernier scales explained. Vernier micrometer and caliper in use. Extreme closeups for experience in reading.



HEIGHT GAGES AND STANDARD INDICATORS. 425 ft. 16 mm. sound. Cost: $8.97. Subject presents fundamental principles of the Vernier height gage. Various forms of standard indicators. Gage's use to scribe necessary lines for a precision lay-out job on angle plate. Use of standard indicator with gage block to check depth of cut.

ALSO AVAILABLE: 5 subjects on the ENGINE LATHE, 5 on the MILLING MACHINE, 3 on the VERTICAL BORING MILL.

ORDER NOW! Or send for free literature giving complete description of these and 13 other subjects of which prints are now being delivered! Order from, or address all inquiries to

CASTLE FILMS

Distributors for

THE UNITED STATES OFFICE OF EDUCATION

CASTLE FILMS	RCA BLDG. NEW YORK	FIELD BLDG. CHICAGO	RUSS BLDG. SAN FRANCISCO	ADDRESS NEAREST OFFICE

Please send immediately FREE catalogue describing THE UNITED STATES OFFICE OF EDUCATION'S "Teaching Tools For Defense Workers."

*Name*_____

*Address*_____

*City*_____ *State*_____ ES-1

Diversitorials

"Priorities" and the Visual Field

AMERICAN education has been, is and will always be the foundation stone of the American way of life, and to defend and perpetuate this way of life America is now at war. Visual materials for projection—such as educational films, slides and film-slides—are a most potent factor in education. The motion picture has been declared "the most powerful weapon ever developed for educating or deluding a people, and a Democracy can survive only if the people learn the truth." The U. S. Government has long produced films for educational purposes but this production is now being enormously intensified. *Hundreds of these Government films* are being used for instruction and training of youth on a nation-wide scale, in camps, shops, schools, colleges, churches, lodge halls, community centers, even in countless homes. *Thousands of films and slides* from other than Government sources are doing their mighty job in American education for defense.

Yet these precious materials are worthless without projectors. The national speed-up for the present emergency is as applicable to education as to industry. More projectors, in unstinted quantity, are a crucial necessity for camps, classrooms and assembly halls—if American education and training are to keep pace with the vast national need. If movie projectors and stereopticons could be doubled in number instantaneously, there are still ample materials available to keep them running, with consequent doubled values for America's education for defense.

From every educational organization, local, state or national—from every school and college—from every superintendent, principal or teacher—from every American who knows what education means to the American way of life—there should arise a unanimous, deafening chorus of approval for such a resolution as the following—already passed with varied wordings by many educational bodies throughout the country:

Be It Resolved that we petition the Government of the United States to assure allotment of all materials necessary for the steady or increased production of equipment essential for motion pictures and other audio-visual aids so urgently and universally needed for American education in the present national emergency.

More Evidence

AN emergency often produces the most strenuous test and positive proof of means and methods in education, as in other fields. The U. S. Army Air Corps is giving the vital training for recruits at a record rate of speed. They are doing a year's work in half a year! Only visual methods could make this possible. Read "Visual Education in the Air Corps Technical Schools" on page 10 of this issue.

First Year of the DVI Zone Plan

THE DVI of the NEA has reached mid-point in its first year of operation under the Zone Plan. Results so far may be said to have reached our expectations if not our hopes. The normal difficulties, inherent in the making of any radical change in organization and procedure, have been greatly increased by the war situation. The national President of the DVI himself, W. Gayle Starnes, has been called to a position in National Defense, which will inevitably handicap his efforts in this most difficult of all years for the departmental Presidency. The defense job even precludes Mr. Starnes' presence at the February meeting in San Francisco, and Mr. Boyd Rakestraw has been asked to take over on necessarily short notice. Nevertheless, a thoughtful reading of the Department's "Among Ourselves" in this issue will show that much meaningful activity is going on in the Zones, excellent foundational work that augurs well for greater progress of the Zonal Plan next year.

From our observation of the situation so far, at least three suggestions occur to us for the second year's program: (1) It would seem desirable to re-elect all present Zone Officers for a second term, in so far as it pleases each Zone so to do and each present incumbent to continue in office. Their experience of success and failure in the first year will constitute the finest sort of preparation for greater achievements next year. (2) There should be a 12 or 16 page folder, ably written, presenting a complete picture of the purposes, activities, and personnel of the national DVI, available in any quantity needed by each Zone as its primary ammunition for membership campaigns. The folder should be so ample in detail, so strong in appeal, that the Zone need prepare only a single-sheet letter, aimed specifically at prospects in its own territory, to accompany the national folder. (3) Definite plans should be formulated for the integration of local and sectional groups, already active within a Zone, into the larger framework and organization of the Zone itself. The exact methods for such intergration, varying as they will in different Zones, must be for decision by the Zones themselves.

Same Department — New Editor

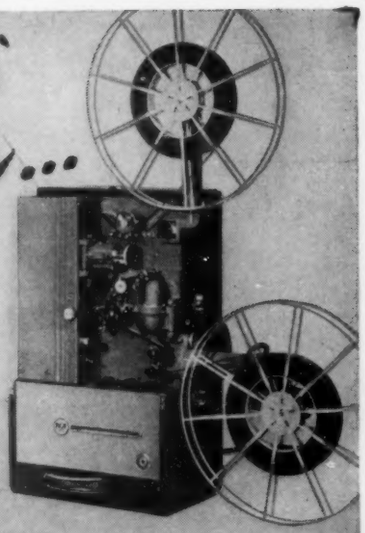
THE department, "New Films of the Month as They Look to a Teacher Committee," was begun in October, 1940, by Don White of the University System of Georgia in Atlanta, and edited by him continuously through December, 1941. Then came the war! The Army called Mr. White to important work as Associate Visual Information Specialist with the Air Corps at Maxwell Field, Montgomery, Alabama, and we release him with our best patriotic grace. Great as was Don White's value to us, we can take his departure cheerfully in view of the vastly greater service he will be rendering in our national emergency. Fortunately, two able volunteers were immediately at hand to carry on. Logically, in these times of "priorities," we accepted the earlier offer by L. C. Larson of Indiana University instead of the later but equally welcome offer of John Gunstream, Director of Radio and Visual Education, State Department of Education, Austin, Texas.

Lawrence C. Larson, after graduation from the University of Nebraska in 1929, taught High School Science, served a three-year principalship, and was appointed Instructor under the Tennessee Valley Authority where he developed the program of audio-visual aids for elementary, secondary and adult education departments. After graduate work at Nebraska and Columbia, he served as evaluator for the American Council on Education's motion picture project, appraising over 500 educational films at the University of Minnesota. Upon completion of his Doctorate, with a thesis in the visual field, Mr. Larson accepted a dual appointment at Indiana University in June 1940 as consultant for the Bureau of Visual Instruction with its wide activities in research and film production, and as Instructor in audio-visual teaching techniques in the School of Education. First appearance of "New Films of the Month as They Look to a Teacher Committee" conducted by Mr. Larson and his staff will be in the February issue of the EDUCATIONAL SCREEN.

We cordially invite all producers of new educational films to take advantage of this notable opportunity for early and telling publicity on their most recent productions. The service entails no expense to Producers other than transportation costs on the film. Merely send the first available print of your new films to Lawrence C. Larson, Bureau of Visual Instruction, Indiana University, Bloomington, Indiana, for review by the Teacher Committee in the next issue of the magazine. The film will be returned to the Producer immediately after the viewing.

On the "Broadways" of America...

RCA Motion Picture Sound Equipment "Stars" for over 6,000 Theatres



Get the same "star" performance for your pictures with

RCA 16 mm. SOUND FILM PROJECTOR

• *For finer, clearer sound... more even light distribution on screen... greater operating simplicity—here's* your *projector!*

When the motion picture industry goes for something in a great big way—you *know* it's good. *It has to be!* And over 6,000 American theatres use RCA Equipment!

That's why we say—give *your* pictures the *professional* projection they deserve with the sensational RCA 16 mm. Sound Film Projector. Completely RCA engineered, it gives new life, new sparkle to every picture. It distributes light on the screen more evenly. It reproduces sound with tones full, clear, and natural—at *any* volume.

In addition, operation of the RCA 16 mm. Sound Film Projector is simplicity itself. All size reels are quickly rewound by motor—cleaning and adjusting are simple. Threading may be quickly and easily accomplished because threading line is cast right on the projection block.

For these reasons—and because of it's delightful portability—more and more schools are getting this projector each week. It's the ideal instrument for your school films!

•

← Radio City Music Hall in New York City

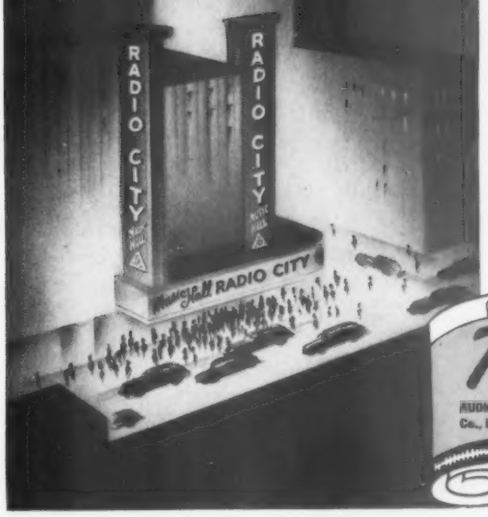
has RCA Motion Picture Sound Equipment. Over 6,000 theatres on the other Broadways of America are similarly equipped to provide their audiences with the finest performance.

16 SUPERIOR FEATURES—YET IT'S PRICED WITH THE LOWEST!

Trademark "RCA Victor" Reg. U. S. Pat. Off. by RCA Mfg. Co., Inc. In Canada, RCA Victor Company, Ltd., Montreal.

FOR EXTRA QUALITY AT NO EXTRA COST ...buy RCA VICTOR!

Modern schools *stay* modern with RCA Tubes in their sound equipment



RCA Victor

AUDIO VISUAL SERVICE FOR SCHOOLS—Educational Dept. • RCA Mfg. Co., Inc., Camden, N. J. • A Service of Radio Corporation of America

Educational Department (E-1
RCA Mfg. Co., Inc., Camden, N. J.
Send complete information regarding RCA 16 mm. Sound Film Projector.

Name_____

School_____

Address_____

City_____ State_____

Visual Aids in the Elementary School Library-Museum with the student-teacher and children enjoying them.

Audio-Visual Enrichme t

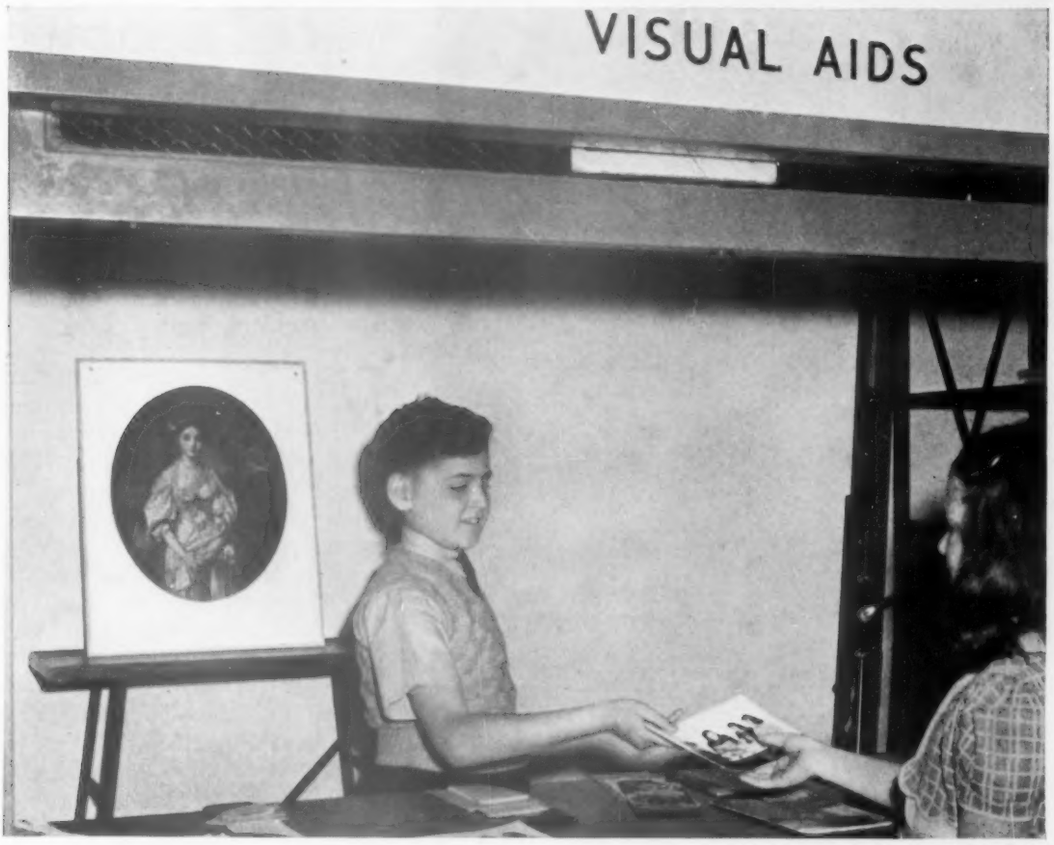
ANNA CURTIS CHANDLER
Hunter College Elementary School, New York City

THE May, 1940, Bulletin of the Department of Secondary Teachers of the National Education Association has an article entitled, "A Study of the Status of Visual Education Courses in Teacher-Training Institutions." The author[1] states that "as a result of a questionnaire sent to one hundred and fifty institutions which prepare secondary-school teachers", the colleges offering a course in Visual Education "have increased very rapidly during the last five years." The titles of the courses mentioned in the various colleges vary from "Visual Education" to "Audio-Visual Education" and "Multi-sensory Aids"—the latter title showing an increasing understanding of the values of sensory appeal. It is generally agreed that this method of learning by seeing, by hearing, by touching—by making use of all sensory aids—insures greater economy and effectiveness of teaching and learning.

Hunter College of the City of New York trains teachers for both elementary and secondary schools, and the instructors of its various departments are alert to the advantage of this method of curriculum enrichment. Through the interest of the Chairman[2] of the Educational Department of the College, coöperating with the Principals of the Hunter Elementary[3] and High[4] Schools, the author of this article was given the opportunity of planning and presenting Audio-Visual programs which integrated with various areas in the curriculum of the College, and demonstrations in which teachers-in-training and children of the Elementary School took part.

Between February 24th and May 23rd of last year, forty-seven illustrated and integrated programs were presented for the various members of the Instructional Staff of the College Educational Department. Some of the areas of enrichment are shown by the following program titles: "The Value of Audio-Visual Enrichment in the Curriculum," "Making History Vivid," "Monuments of New York City," "Beauty in Building," "How to Look at Architecture and Sculpture," "How to Look at Pictures," "When New York Was New Amsterdam," "Life in a Medieval Castle," "Shakespeare's England," "Italian Backgrounds in Art." The visual enrichment in these programs consisted of large color prints, stereopticon slides and 16mm films from the Metropolitan Museum of Art Lending Collections; slides, habitat-groups and dioramas from The American Museum of Natural History, New York City; and book and magazine illustrations. College students were made acquainted with the many aids in Visual and Audio-Visual Enrichment available for their use as teachers, in Art, Natural History and

[1] E. Winifred Crawford, Director of Visual Education in the Public Schools and Instructor in Visual Education, State Teachers College, Montclair, N. J.
[2] Professor Philip R. V. Curoe, Chairman of the Department of Education, Hunter College of the City of New York.
[3] Dr. Florence Brumbaugh, Principal of the Hunter College Elementary School.
[4] Dr. Jean Brown, Principal of the Hunter College High School.



Business is good in the Visual Aid Room. Grade 5A was in charge under the guidance of their teacher.

e the Curriculum

How audio-visual programs integrating various areas of learning are developed at Hunter College with the aid of student-teachers and demonstration classes.

History Museums; Art Galleries; Libraries and other Educational and Commercial Bureaus and Companies.

Whenever possible, these Audio-Visual Enrichment programs—often with appeal to the sense of touch, as well—were held in the Hunter Elementary School Library-Museum, as demonstrations of Integrated Programs of especial interest to classes from the College and to student-teachers, since children took active part. Integration of Art Appreciation and Creative Expression in Art, Literature, Dramatics, Social Studies and Music created greater understanding and interest on the part of the children in the various areas and their relationships. Older children from the departmental classes helped the younger in the interpretation of these programs, and in the resultant creative expression under the guidance of the Teacher of Art.[5] College students, assigned to Literature and Art, and to the non-departmental classes taking part, thus add to their teaching experience through observation and through personal assistance in the planning and developing of these programs in which various areas of learning in the curriculum are integrated. They have gained experience in the selection of color prints and stereopticon slides, and together with children from the eighth year classes, have distributed the Metropolitan Museum color prints daily, to the various rooms in the school, and stereopticon slides as ordered by various class and subject teachers.

The following are examples of some of these experimental Integrated Programs, given as demonstrations:

1. *Beauty in Building*—a Radio "Television" Demonstration, before seven College classes, by eighth year pupils, integrating Dramatics, Art, Literature, Social Studies, and Music. Some of the College students who observed wrote their impressions, and eighth and sixth year pupils made original drawings, in color, of their interpretations.
2. *The French Maid Who Saved Her Country*—enriched by Audio-Visual Aids, integrating Literature, Art Appreciation and Creative Expression, and Social Studies. Eighth year pupils guided third year children in their creative interpretation and expression. College students assisted with stereopticon slides and helped with the mechanics of the entire program.
3. *Springtime* in poems, songs and colorful pictures of flowers and birds. College students led the second, third and fifth year children in music, and the children themselves presented poems and stories, and discussed the pictures.
4. *How to Look at Pictures*—demonstrations with various grades in the school from the first year through the eighth. College students helped select the color prints and slides. As each picture was presented it was discussed by the children not only from the point of view of the story, but also from that of the "Language of the Painter."
5. *Indians in Art and Story*—a demonstration by third year children in Indian costume, assisted by eighth

(*Continued on page* 28)

[5]Marie A. Boylan, Teacher of Art in the Hunter College Elementary School.

Visual Education in the Air Corps Technical Schoo

A report on production activities of the Training-Film Unit and value of visual aids in technical instruction.

LT. NED L. REGLEIN
Director, Training Film Preparation Unit,
Chanute Field, Rantoul, Illinois

Top, Cameraman preparing to take a shot for a filmstrip. Other three pictures show motion picture crew shooting in the Teletypewriter Department, Chanute Field.

VISUAL education in the Army is about thirteen years old, but it is only recently that much emphasis has been placed upon motion pictures, filmstrips and associated aids. In 1937 the first Training-Film Field Unit was established by the Signal Corps. Since then, similar organizations have been set up throughout the Army. The Air Corps has been particularly interested in the possibilities of visual aids, and at present there are four Training-Film Preparation Units functioning to help in the great task of teaching scores of thousands of men the highly technical phases of present-day aviation.

The Air Corps Technical School, with branches at Chanute Field, Illinois, Scott Field, Illinois, Lowry Field, Colorado, Shepherd Field, Texas, and Keesler Field, Mississippi, has been actively promoting the use of visual aids in its Army classrooms. Not only are training-films (motion pictures) and film-strips used, but also large colored charts, reproduced by the silk-screen process, are utilized. The latter are printed for the Air Corps Technical Schools by the Illinois Art Project.

Training-films used by the Air Corps and by the Army at large are produced either by industrial and commercial concerns, or by the War Department. For example, the film "Sex Hygiene" was produced by the Academy of Motion Picture Arts and Sciences in collaboration with the Medical Department and the Signal Corps. On the other hand, many subjects are completely produced within the military organization; for example, the motion picture "Principles of Electricity Applied to the Aircraft Engine", which is a joint production of the Air Corps and the Signal Corps.

Visual aids play a particularly important part in the Air Corps Technical School because of the complexity of the subjects and the huge number of students involved. At Chanute Field alone more than nine hundred students are graduated every two weeks from a twenty-two weeks' course. In the Air Corps Technical School Branches, courses in airplane mechanics, meteorology, parachute rigging, aircraft radio operation and maintenance, aerial photography, and many other highly technical subjects are taught. Thus the value of training-films and film-strips becomes apparent at once.

A Training-Film Preparation Unit has been activated at Chanute Field, Illinois, to produce plans and materials for films and film-strips to be used in teaching future airplane mechanics, parachute riggers, weather observers, Link-Trainer instructors, radio mechanics, and other technicians. The staff includes three com-

(*Concluded on page* 31)

A Radio in the Schoolroom?

Emphasizing the need for careful planning in order to derive the fullest benefits from school use of radio.

ELIZABETH STADTLANDER

State Teachers College,
Slippery Rock, Pennsylvania

THE radio, the movies, the automobile! Are these the very banes of teachers' existences? When Johnny is so tired that he can scarcely sit up because the automobile has made it possible for him to be a part of an entertainment fifty miles away, then truly the automobile does harass the teacher. If the class slumps into a lethargic state every other day because the movie manager brings a new show to town every other night, then indeed the motion pictures fret the teacher. And the radio! No matter what topic is to be discussed, someone has heard a program about some phase of the work so that just the edge of the presentation is taken off and the class becomes worldly wise.

But what of the other means of gaining information? Are there no library books in schools today? Are textbooks in disrepute? Can teachers not teach effectively any longer? Can children not imagine what a region or event might have been like without having a visual image plus sound effects to imprint it upon his mind?

Yes, all of the best of the former methods of teaching still exist. Children are still taught carefully and encouraged to read. Textbooks and library books are constantly becoming more enticing; their pictures are examples of sheer beauty, their contents are more vital to the interests of children, and the physical aspects of the books are far better. Teachers themselves are mostly products of at least four years of college training, during which time special emphasis is given to building backgrounds for well-rounded personalities. What then makes it necessary for teachers and pupils to go beyond the four walls of the schoolroom in order to gain concepts of present and past events?

You would not ride into town in a horse and buggy if a train, bus, or car made the same trip. Why then should teachers employ horse and buggy techniques in their teaching? No good teacher will supplant her teaching with the movie machine, the school bus, the radio, or any other extraneous device. In fact, no teacher who is truly interested in the welfare of her pupils will ever be content with substitutes. And every teacher will find that the use of these sensory aids makes teaching more rather than less complicated. Every teacher who has tried to supplement her teaching with visual aids has found that such lessons require additional preparation, additional skill in the manipulation of the device, and additional assistance from outside sources in order to make the devices available to the class.

In spite of all the extra preparation involved, however, the alert and interested teacher knows that such lessons are of value to her class, that such materials are preparation for the present as well as for the future, and that children react favorably to the use of those implements of learning which are common to the home and the community.

Far from supplanting teachers and their work, the broadcasts of the National Broadcasting Company and the Columbia Broadcasting Company are designed to supplement and vitalize their work. They bring into the classroom the living world in the form of important national and world events, of fine dramatic and musical talent, of living stories from the literature of the past. They are planned to broaden the student's horizon and inspire him to increased reading and greater interest in his work.

But like reading or writing, some training must be given. It has been observed by teachers that children can close their ears to extraneous noises and speaking, while they carry on with their work. Is this the result of the radio in the home? Do children listen half-heartedly to programs and promptly forget all that has been heard? Do children simply close their minds to the radio when they have other things to do or to think about? If the sensory impression made by the radio is weak due to the common use of the instrument in the home, the first duty of the teacher in planning the use of the radio in the school is to improve the sensory attention.

With the advent of the radio in the school and with this problem in mind, the children of the sixth grade of the Laboratory School of the State Teachers College at Slippery Rock, Pennsylvania, decided to tackle an experiment with their hearing abilities. With the help of the teacher, the children decided to weigh their various class procedures against the radio. The various procedures which had been used were reading, reading and discussing. Against these two methods they chose to weigh hearing. They had been hearing the Columbia Broadcasting Company's morning programs. They had been studying Latin America. For two mornings out of the week these two problems dove-tailed. How much better were the presentations, how much more important to the child. They all liked the radio programs, most of them liked to read, and all of them liked to talk.

To put the problem to an actual test, the teacher gave a reading lesson on one phase of Latin American life followed by a short factual test; another lesson on the Americas involved reading and discussion culminated by a short factual test; a radio program of historical events of South America was completed when the short factual test was given. The children offered to do their best in order to test the various procedures.

As a result of this experiment, the children discovered that reading and discussion were superior to listening. The self-activity necessary to participate in a group discussion convinced the children that active learning is superior to passive listening. On the other hand, the children discovered that listening was superior to reading. They explained this by the fact that the action as described in a radio portrayal of an

event lends interest and color to the story. Children at this age are not ready to study and learn by themselves; they are much too social for this type of teaching. They also learned that discussion and reading are superior to mere reading alone. Again this points to the very social nature of pre-adolescent children.

The next interest with the children lay in the determination as to whether they could improve their listening ability if they desired to do so. After hearing several more programs, they asked for a test to discover if they were listening any better. These results showed that 87.1% of the children had improved in their listening capacity.

Such experiments are not so important in and of themselves, but they do indicate a trend. They do point out that children as well as adults can go blithely on with a radio blaring and still be oblivious to the fact that there is noise if not something of importance being broadcast. They also indicate that training in the choice of materials, in the evaluation of the programs which come across the wave lengths, in the critical digestion of programs are important factors in the training of our children for life in a democracy which we hope—indeed, intend to maintain.

If such facts are true of the sixth grade, they must be equally true of other grade levels. If teachers are going to employ the modern devices of teaching, training in the wise use of these devices must be developed. If the broadcasting companies are interested in serving the youth of this land, they must provide programs which are suitable for very young children at a time when teachers may lend a hand in this training. In order that we may begin this training of children in the primary grades, just as we begin the training of children in health habits, reading skills, and motor coordination, programs for wee tots must be presented. Teachers in collaboration with broadcasters hold the solution to this problem.

How We Use Motion Pictures in Chemistry Instruction*

Some conclusions as to how films serve the teacher of chemistry, as drawn from one professor's experience.

DR. CHARLES M. MASON
University of New Hampshire, Durham

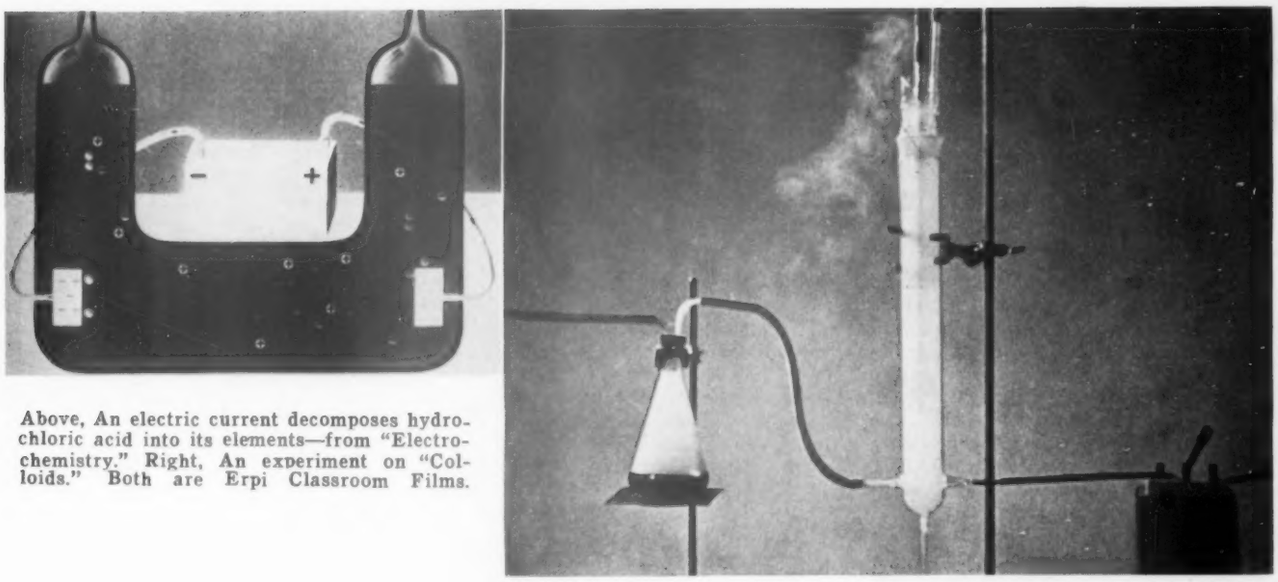
FOR at least eight years the chemistry department at the University of New Hampshire has been experimenting with the use of motion pictures to supplement the regular instruction in chemistry. Up to the present time the work has been entirely supplementary to classroom instruction. It has also been entirely voluntary on the part of the students as far as attendance was concerned. About five years ago the irregular program then in use was abandoned, and replaced by a series of film showing held at a regular time each month. For the last five years these showings have drawn an average attendance of about 125 students with no other stimulus than mild advertising consisting of class announcements, bulletin board postings and short descriptive notices in the college paper. For the future, however, improved equipment will enable us to abandon this procedure and reach all of the students, as the films will be used in the classroom. It is also intended to make use of film slides in the lectures which will supplement the moving pictures to some extent with a more flexible visual program.

Looking back over the years of experience with this program one finds several conclusions which can be drawn from the experience gained. In the beginning we depended on silent films but by 1936 it became apparent that these could no longer be considered entirely satisfactory. In the first place, the complete use of sound film in commercial work presented to the students an experience and perfection which made them less responsive to silent pictures. Secondly, the industrial concerns began to produce their educational films in sound and such pictures, even with titles, are not suitable for the one-third slower speed at which silent pictures are run. Although we have never given up the use of silent pictures, as there are some so good we feel we cannot, we now supplement these with music by means of a turntable, running them usually at sound speed. Since 1937 therefore we have depended on sound films almost entirely with correspondingly better results.

Our records show four major sources of suitable films for instruction in chemistry. In general one must

A scene in "Exploring With X-rays"—General Electric film.

* Presented before the meeting of the Northern Division of the New England Association of Chemistry Teachers held in Durham, New Hampshire, April, 1941.



Above, An electric current decomposes hydrochloric acid into its elements—from "Electrochemistry." Right, An experiment on "Colloids." Both are Erpi Classroom Films.

differentiate between films designed to teach with, and those which merely explain a given chemical process. The first class of films, as far as use is concerned, are those of high educational value, such as "Colloids," "Electrochemistry," "Catalysis," prepared by Erpi. Eastman Classroom Films, and American Museum of Natural History are other sources. These are, however, all too few. Then as a rule they are rather elementary for college work and can serve only to illustrate a few topics of class discussion. Those with the most animation are, in my judgment, the best, as pictures of lecture experiments will always be a poor substitute for the real thing. Films of this type are of most value in teaching such subjects as the kinetic theory, atomic theory and electrochemistry.

A second class of films of great value are those prepared and loaned by the federal and state governments, particularly the U. S. Bureau of Mines. "Sulphur" is a typical example. In general, for science at least, we have always found all films in these groups to be entirely satisfactory. It is of interest to note that the new announcements of the Bureau of Mines are all in sound—a reversal of their previous policy. There are so many government agencies issuing films, it is impossible at any one time to give a complete list. Most film depots, such as those here at New Hampshire and at Boston University have many of these films on deposit. Some departments of the government prepare from time to time lists of films and these can be obtained by writing direct to the publicity offices of the departments. Such lists tend to get out of date very rapidly.

A third important class of films are those prepared by industrial firms for educational use. "New World Through Chemistry," "The Wonder World of Chemistry," and "Steel, Man's Servant" are examples. Unfortunately, some firms confuse education with advertising and so these films have run the whole gamut from excellent to terrible. Great care must be taken to avoid films prepared for sales work as students tend to take these cynically and learn little. Good industrials are hard to beat, however, in educational value, particularly in explaining a process of manufacture and in giving students an insight into the enormous size of chemical industry. Such films are best obtained direct from the advertising departments of the companies concerned. Among the best companies are duPont, General Electric, Westinghouse, and the Ford Motor Company. Several of the chemical companies also have single films they have loaned us.

A fourth class of available films are those prepared by professional producers either in Hollywood or otherwise. At the present time these are not very plentiful. They are usually rental films and therefore often become obsolete before they are discarded from the theatres. We recently rented one such film in good faith which depicted a process which has been discarded for fifteen years.

Our experiences have led us to certain definite ideas about the value of pictures obtained from different sources as follows:

1. In general, new industrials will be more up-to-date than corresponding films prepared for rental purposes, as there is a tendency in large corporations to discard films very soon after they are made. In industrial pictures, however, the topic will be limited strictly to manufacture and use of a certain product and very little fundamental chemistry can be taught by them.

2. Government pictures are always good. They will teach processes about the mineral industries which can be taught in no other way.

3. Rented films, except those of known educational value, are to be avoided due to their rapid obsolescence.

In conclusion, one might say that we have found that our films have their greatest value along three lines. They serve, first, to create an interest for the ordinary student in chemistry as it really is in life, and, furthermore, they show chemistry out of the test tube stage, a feat impossible in the laboratory. Lastly, they serve to "drive home" visually the processes and ideas which the teacher is trying to get over to his pupils. All films are an aid, a means to an end and should be so considered. They only supplement careful teaching in the classroom.

MOTION PICTURES—NOT FOR THEATRES

Installment 33. — Film activities of U. S. Government agencies are reshaping the entire non-theatrical field. Here is their history from the beginning.

By **ARTHUR EDWIN KROWS**

IT has been related here that in 1912 Paul Redington, who became chief of the Bureau of Biological Survey in 1927 but was then engaged in field work for the U. S. Forest Service, accompanied an Edison newsreel cameraman into the Sierras. This, though, did not represent the earliest motion picture work of the Department of Agriculture, that having been accomplished in 1908, when Lewis Williams, chief of the Division of Illustrations, and W. S. Clime, his assistant, filmed a flight of the Wright Brothers at Fort Myer.

The camera used at that time, a Jenkins machine with a so-called "beater" movement, was brought forth again, in 1910 or 1911, to photograph cattle shipments for Joseph Abel, of the Bureau of Animal Industry. Secretary "Tama Jim" Wilson did not approve of motion pictures then, so C. Francis Jenkins, (founder of the Society of Motion Picture Engineers in 1916—he died in 1934), inventor of the camera in question, personally used it to help the good work along by surreptitiously "shooting" Wilson while he was addressing a group of Corn Club boys. The resultant film, sprung on the old gentleman as a surprise, won him over.

In 1912, the time of Redington's trip, the Department of Agriculture film endeavors began in earnest. W. S. Clime and George R. Goergens, under Andre Boetcher, chief of the Section of Illustrations, were regularly assigned to motion picture activity, and a laboratory—possibly the first government film laboratory in the world—was established. Two years later, 1914, a Departmental motion picture committee was set up under the late George Wharton, then chief of the Office of Information; and by 1915 the service was so far grown that it sent some forty completed subjects to the Panama-Pacific International Exposition at San Francisco.

Don Carlos Ellis (not related to Carlyle Ellis) was placed in charge of the Department of Agriculture film work in 1917. Thirty-four years of age, he had been engaged during the preceding six years in educational projects for the U. S. Forest Service. Before that he had been an instructor in English and history at Gonzaga College, where he had obtained his master's degree after gaining his bachelor's certificate at Georgetown. He remained at the Department of Agriculture film post until late in 1919.

Under Ellis there seems to have been intensive effort to obtain theatrical circulation of the Department motion pictures, the need probably arising from the exigencies of wartime, because normal use of reels from this source is primarily for county agricultural agents of the State Extension Service. May 12, 1917, "by official wartime request," Bray used a Department of Agriculture film in "Paramount Pictographs No. 67" and six months later, in October, 1917, Universal began releasing the "first pictures" made by the Department of Agriculture. The Bray output showed the improved results to be obtained by intensive farming. The Universal announcement, at least, covered an entire series, it being stated there that the subjects "will include some studies of the work of the Forestry Bureau in preventing and fighting fires in the big forest reserves under Government control, and other timely subjects will show the new methods of preserving vegetables by drying and by utilizing the cold pack." I have no information to show that this elaborate Universal series ever materialized—and certainly the pictures named were not "the first."

Raymond Evans came to film work in the U. S Department of Agriculture with native understanding of farm problems and a newspaperman's way of presenting the helpful answers.

Ellis's personal relations with Universal must have been exceptionally cordial, however, for, in 1920, he joined Harry Levey as "director of educational production" there. In March of that same year he was succeeded at the Department of Agriculture Section of Motion Pictures, which was then a part of the Division of Publications, by Fred W. Perkins. Perkins showed much activity in the place, writing promotional articles and delivering lectures on the work, besides expanding the service itself. He had come to the Department in 1917 as staff member of the Office of Information after approximately ten years of newspaper experience.

In 1921 the Section of Motion Pictures was transferred to the Extension Service as the Office of Motion Pictures. In 1922 the Office was housed in a laboratory building on C Street, built especially for the purpose. In 1924 the growing activity was provided with a separate building all its own, containing a studio, a complete processing laboratory, vaults, cutting space, projection theatre and offices. The chief cameraman there then was George R. Goergens, who is still vitally occupied with the film business of the Department of Agriculture. The Department circular of 1922 named 150 of its motion picture subjects, mostly single and double reelers, which would be furnished free (plus transportation charges) to responsible applicants. Approximately 182 subjects were being distributed in similar fashion in 1924, and the estimated number of persons who had viewed them during that year was ten million. Titles included reels on plant and animal care, federal meat inspection, home conveniences, national forest resources, game conservation and the organization of juvenile agricultural clubs.

Late in 1924 an especially promising arrangement was concluded whereby Pathé would produce, in coöperation with the Department of Agriculture, a series of pictures on the basic industries of the United States. In the following spring the first two of these were released: "Meat—from Hoof to Market," and "The Kindly Fruits of the Earth," both one-reelers. Each was accompanied by a syllabus for teachers. In the meantime, the direct production of the Section itself, speeded up, and announcement succeeded announcement of films on earthworms, grasshoppers and other insect pests, and one called "Milk for Health," in which Walter Johnson, baseball pitcher idolized by American youth, attested the virtues of that well known fluid for emulation of his example in drinking it.

Work of the Section for 1925, as reported by the Secretary of Agriculture in the first formal annual statement of that sort required of him, estimated showings, to and including that year, to 900 million persons of a library of 1,862 reels, comprising one to fifty copies of 201 separate subjects. Among the 201 were "The Ox-Warble—a $50,000,000 Tune," "Clean Herds and Hearts," "Out of the Shadows," "The Golden Fleece," "The Charge of the Tick Brigade," "She's Wild," "Cloud-Busting," "There's Magic in It" and "Weighed in the Balance." Distribution was accomplished chiefly through the 3,000 to 4,000 county extension agents of the Department. Many more subjects were produced in 1926, with still higher circulation figures. But, at the end of that year, the efficient Mr.

Perkins resigned to become southern district manager for the Newspapers Film Corporation and Jam Handy Picture Service of Chicago.

Perkins was succeeded as chief by Raymond Evans. Mr. Evans also was conscientious and able, as the records of his earlier career amply indicate. Born at Morristown, Tennessee, in 1875, he was reared on a farm in Central Ohio when American agriculture was in a period of its lustiest expansion. Farm youths then especially looked to city futures, and Evans, no exception, presently found himself in metropolitan newspaper work, attaining that success which was marked by his becoming successively, from 1897 to 1913, Sunday Editor of the Toledo *Times-Bee*, editorial writer on the Pittsburgh *Sun*, Sunday Editor of the Pittsburgh *Post*, and feature and editorial writer for the Newspaper Enterprise Association. In 1914 he became private secretary to the Assistant Secretary of Agriculture; and after only a year there, he was appointed Editor in Farm Management for the U. S. Department of Agriculture. In 1921 he joined Perkins in the Motion Picture Section, Perkins himself having only lately become chief: and when Perkins resigned in 1926, as already related, Evans replaced him. Probably no one has occupied this post in an atmosphere of greater loyalty and affection on the part of his close associates. Under Evans the records of service continued to grow. But under him, too, the public announcements of what was being accomplished took on a less exultant tone. To the *blasé* outsider this could have but one meaning—that politicians were beginning to notice that here was another Government activity which might be given a trading value in the patronage system. The idea must therefore be discouraged, and what could be more expedient than to minimize the achievements? To express pride in doing a good job for the people is not always wise.

In July, 1926, the motion picture activity of the Department of Commerce was inaugurated as a Section of the Specialties Division. In 1929 it was elevated as a full Division in its own right. The function here was to promote and develop the foreign and domestic commerce of the United States through the medium of the screen, not by producing films, but by keeping track of the normal activities in the line throughout the world. In this place much valuable work has been accomplished by the research assistant, Mr. E. I. Way, he having done perhaps more than anyone else previously to accumulate, for reference purposes, the current information on the entire non-theatrical field.

When the Section was made a Division, in 1929, there was appointed to command it Clarence J. North, who had joined the Specialties Division in January, 1923, as an editorial assistant. North, born at Swampscott, Massachusetts, in 1892, had studied at both Harvard and Columbia Universities and had been managing editor of *Export Trade and Finance*, a trade paper in New York. He resigned from his film post in 1933. Nathan D. Golden, an Ohioan born in Bellaire in 1896, who had had motion picture connections in the years before the World War, was his successor. The foreign representative of the section was George R. Canty, stationed at Paris with the rank of trade commissioner. Canty is the same who, in 1937, became continental European manager of Universal Pictures, and who, in 1939, resigned from Universal to return to United States Government work. Much of the impetus given the film endeavors of the Department of Commerce has come from Julius Klein, who was Assistant Secretary of Commerce of the United States from 1929 to 1933, and wrote extensively in newspapers and magazines concerning the American motion picture's influence on world trade.

By enlisting wide coöperation of private industry, Morton Leopold built for the U. S. Bureau of Mines a large and effective film program.

Motion picture work of the Department of the Interior has been most important in the U. S. Bureau of Mines which, in 1929, boasted that its 525 sets of subjects, "totalling a length of more than 250 miles," composed what was believed to be the largest collection of industrial films in the world. In April, 1941, the library was reported to contain 5,000 reels comprising prints of more than sixty different films. They had been provided through an interpretation of a clause in the act passed and approved by Congress February 25, 1913, wherein, after defining the province and duty of the Bureau of Mines as to conduct investigations into mining for general efficiency and well being of the workers in the industry, it was added that the Bureau should "disseminate information covering these subjects in such manner as will best carry out the purpose of the act."

Among the chief producing causes of the establishment of the U. S. Bureau of Mines, July 1, 1910, had been recent Alabama mine explosions—at Hulga, where forty-one men were killed, and at Palos, where approximately 150 were entombed. These calamities made safety a strong factor in the aims. Morton F. Leopold, happy always to describe himself as a safety engineer, was therefore placed in charge of motion picture production and, from his office in Washington, he performed his duty with energy and enthusiasm. The first Bureau film was made in 1916, when he took this special command. Scenarios for given subjects have long been prepared under his personal supervision, and he also coöperates intensively in production. Leopold was born at Duluth, Minnesota, in 1889. He studied for two years at the University of Pennsylvania, one year in the U. S. School of Submarine Defense, and one in the Engineering School. For five years he served in the Army. His connection with the U. S. Bureau of Mines dates from 1911.

About 1920 officials of the Bureau decided that it was of importance to have a really elaborate educational film program instead of just a few "shoestring" reels. But the question was, how to do it? As in other Government bureaus, the funds for picture-making were limited if not non-existent. However, the Bureau of Mines made up this deficiency handsomely by gaining the coöperation of leading private industrial organizations throughout the United States. They opened their plants and systems to give Leopold all the subject matter he needed, and paid the production bills besides. All charged to the Bureau of Mines was the sum of salaries and personal expenses of its own representatives who supervised the work. The first film to be provided in this way by the mining industry was "The Story of Coal," which was made principally to show safe mining practices in that field. An oddity among these coöperative productions is a four-reeler, called "When a Man's a Miner," presented to the Bureau of Mines in memory of Francis S. Peabody, well known Illinois coal operator. During 1940 over a million dollars was appropriated by members of the mineral and allied industries to carry on the work. No Government funds whatsoever are expended in production, save as already indicated, or in providing copies for distribution. Each picture is devoid of trade names and all other material which might be construed as advertising.

High officials in these compliant private industries frequently remained with the production crew to advise and to issue necessary spot authorizations. Sometimes new equipment and machinery were supplied to make desired effects possible. In one case a petroleum pipeline was thrown across the Mississippi River just to show how such a job was done and, on another occasion, several hundred tank cars were painted so that no trade name would appear upon them. To produce the subjects selected the Bureau cameramen visited many remote places. One traveled through Continental Europe and into Africa to photograph oil fields, incidentally being shot at and jailed by suspicious authorities and released only upon intervention of the local American consul. For a picture on copper the Bureau representative journeyed 25,000 miles,

which included a jaunt to Alaska. They went overland, overseas, high in the air and deep under ground. In various instances the making was undertaken by regular non-theatrical producers, although, of course, the Bureau representatives remained in command. A specific instance was "The Story of a Spark Plug," produced under the direction of the Bureau in 1925 by the Atlas Educational Film Company. Rothacker also was favored.

Distribution of the films is conducted mainly by R. A. Wood from the Bureau of Mines Experiment Station at Pittsburgh, best situated for mining interests, and from fourteen regional sub-centers. The circulation, however, has always been exceedingly wide, the excellent safety lessons making the reels especially valuable in regular schools and in centers devoted to adult education. In one three-month period, about 1929, it was estimated that the Bureau of Mines reels had been viewed by 665,000 persons. In 1938 it was reported that in the preceding year they had been attended by 10,351,732. Many sets have been purchased for exhibition in foreign countries, notably Japan, such sales having, of course, proper Governmental authority. Foreign demand is marked also for the films of the Department of Agriculture. Requests for some items are so numerous that prints are booked a full year ahead, and a number of subjects issued by the Bureau of Mines are in such favor that a hundred copies apiece are used for circulation.

However, in industrial coöperation of this sort there are embarrassments. In November, 1923, Hubert Work, Secretary of the Interior under the Republican Presidents Harding and Coolidge, was obliged in a public statement to deny favoritism in production of Government films and, in the autumn of 1924, there was further explanation demanded by the Democratic National Committee in furtherance of its disclosures on the so-called Teapot Dome scandal, charging that the Sinclair Consolidated Oil Corporation had maintained a propaganda partnership with the Bureau of Mines in producing its celebrated seven-reeler, "The World Struggle for Oil."

The U. S. Department of the Interior has had its other motion picture activities principally in its Bureau of Reclamation and its National Park Service. It was through its Bureau of Education, which acts as a clearing-house of information on visual aids and produces no films, that A. P. Hollis issued his useful bulletin, *Visual Education Departments in State Institutions*. From the Bureau of Reclamation, in 1929, might have been procured thirty-three reels of information almost exclusively on western Government projects for irrigation and soil recovery. In the National Parks Service at the same time were to be found about seventy popular reels, mostly scenic in character. Herford Tynes Cowling began his motion picture career in 1909 at the Bureau of Reclamation, which he joined at the age of nineteen in capacity as a cameraman. He remained there till 1916, in which year his films on the national parks, made for the Government, were deemed sufficiently important for theatrical release by Gaumont.

The Department of the Interior abolished its film work in 1923. But it was resumed three years later, at which time Dr. Maurice Ricker was transferred there from the United States Public Health Service. He rebuilt the laboratory and produced several pictures—until 1929, when he was recalled to the Public Health Service and detailed to duty in New York to make films in collaboration with Dr. Bruce Mayne, of the Malaria Division of the P.H.S. Fanning Hearon, who was director of motion pictures for the Department of the Interior in 1937, became executive director of the Association of School Film Libraries in 1938. Ellsworth C. Dent, who also was Department film chief for a time, later became head of the educational division of RCA-Victor.

In the Department of Labor the motion picture interests have been primarily in the Children's Bureau and the Woman's Bureau. These Bureaus, insufficiently supplied with funds for production, necessarily have had scanty screen programs. Both were served by Carlyle Ellis, among others. He made two or three of the subjects on a speculative basis, regaining his production costs out of print sales, an interesting method, but scarcely a profitable one. For the former Bureau he produced the celebrated and notable items "Our Children," a child hygiene picture, "Well Born," on prenatal care, and "Sun Babies," on prevention of rickets. For the latter he made "When Women Work," a two-reeler contrasting favorable and unfavorable factory conditions. It was said of "Our Children" and "Well Born" that, with their English titles translated into five other languages, they were being shown exhaustively in the British Isles, South America, Central Europe, China, and most of the British possessions, including India and Egypt.

The Woman's Bureau had also a single-reeler concerning its own organization and operation, a two-reeler reciting the history of women in industry, and another single reel entitled "Within the Gates," remarking the importance of women as producers of the world's goods. One other Bureau in this Department, which showed a disposition towards a continuing film program, was that of Immigration. In the summer of 1916 it announced its completion of the first subject in a series. That one was called "The Americanization of Stefan Skoles."

The U. S. Army and the U. S. Navy are, and have been heavy users of motion pictures for recreational purposes—the Navy alone was estimated in 1936 to be spending $307,000 annually for this, while Thomas H. Martell, of the Army Motion Picture Service in New York, was arranging bookings for a circuit of seventy-seven Army theatres—and, as their branches of service have great popular interest beside, theatrical producers have applied to them frequently for permission to use their personnel and paraphernalia in related stories. This aid has been given generously, despite occasional criticisms from persons imperfectly informed, so long as the purposed film has been one which would stir patriotic feeling or promote recruiting. All the Government asks in return is that one print of each completed subject shall be assigned to the given Department's archives.

The film exhibition section of the Navy, as reported in 1932, had 287 show units throughout the world. Distribution and servicing of the reels was handled from main exchanges at New York, San Diego, California, and Cavite, Philippine Islands, supplemented by exchanges assigned one to each major operating unit of the fleet and by lesser exchanges at Navy bases.

Direct production of Army and Navy, save in war emergencies, has been comparatively slight. A few subjects have been made first-hand to encourage enlistments, to illustrate technical points of training and for vocational guidance of men retiring from service—during the First World War the Signal Corps itself made sixty-three reels of training films; but the larger needs have generally been cared for by outside producers. In the Army the U. S. Signal Corps, which has its own well equipped studio and laboratory, has done most of the internal picture-making; in the Navy it has been the Recruiting Bureau and, occasionally as warrant has arisen, a few other Bureaus have been active. The Bureau of Navigation had an official motion picture cameraman—his name was J. M. Blaney, and he remained there till 1915—beginning in 1908. The Signal Corps specifically is said to have made its first contract for a training picture with the Lee Film Company, of San Antonio, Texas, April 5, 1917, when American troops were on the Mexican Border. John J. Pershing, then Major-General of the Army in that quarter, personally approved the document. War was declared on Germany by the United States the following day.

Picture work is shared by three branches of the Army, the exhibition agency, operating through the Adjutant-General's Department; the Signal Corps, which produces all the relevant pictures "on the ground"; and the Air Corps, which makes those off the ground. With the rapid expansion of military aviation the U. S. Army Air Corps has gone extensively into photographic service. There were, in 1936, fourteen Army Air Corps aerial photographic sections in the continental United States, Panama, Hawaii, and the Philippines, and a motion picture unit in the Office of the Chief of the Air Corps to coöperate with newsreel agencies and to distribute Air Corps films for publicity, educational and training purposes. The Air Corps laboratory, situated at the Materiel Division, Wright Field, Dayton, Ohio, is managed by Louis Hagenmeyer, who has been with the Division since 1918. An especial school to train the Army aerial photographers is conducted at Chanute Field, Rantoul, Illinois.

In 1929, when Maurice Ricker left the Department of the Interior and came to New York for the United States Public Health Service, talking pictures were coming in and were beginning to be used in Government work, notably by the Army and the Department of Agriculture. As related problems arose, the Government film men naturally consulted Ricker for his specialized knowledge which had come about because, while he was connected with the Health Service as a dollar-a-year scientist, his other employment was as an engineer with the United Research Corporation, a subsidiary of the enormously successful theatrical sound film producers, Warner Brothers.

One of the Government's prime motion picture difficulties had been caused by the sudden obsolescence of its laboratories. Film development there was by the old "rack-and-tank" method; and this left disturbing marks on "sound tracks" going through. Therefore it was necessary to have all Government sound films processed outside at what were prohibitive prices for Department budgets. At last, in 1934, George Goergens, of the Department of Agriculture, asked Ricker to assist in writing specifications for a proper developing machine. That was readily arranged but bids for construction of the machine were so far beyond the limits of available funds that it seemed that the project would have to be abandoned—until Warner Brothers consented to help. Their shops at United Research being at that time largely inactive, they donated the use of their equipment and, under Ricker's supervision, a group of employees there built the developing apparatus now installed at the Department of Agriculture.

The Department of Agriculture Office of Motion Pictures was then in temporary quarters in the old Bureau of Fisheries Building, the C Street structure having been demolished to make way for erection of the present "South" Building, which is today's main Department of Agriculture unit. The new edifice, where the Office was to have, in 1935, the largest and best equipped film plant in Government service, was not yet ready for occupancy, so the needed processing machine was delivered "knocked down," not being assembled until 1936, when Ricker was transferred from the Health Service to the Department of Agriculture to install it. Incidentally, Ricker was to remain in this place long after the work in question was done. Warner Brothers sold their research laboratory to the Radio Corporation of America, so the good doctor stayed on, devoting most of his time thereafter to direction of Department of Agriculture films.

And that was not all. Major (later Lieut. Col.) E. Melvin Gillette, in charge of the motion picture laboratory of the U. S. Signal Corps, saw here an opportunity to obtain for his place a similar processing machine. Ricker coöperated as usual, and helped to design and to build the apparatus which now functions at Fort Humphreys, where all negative and positive films for the Army's expanding needs are put through.

From the U. S. Treasury Department have come the films of the U. S. Health Service, notably important subjects dealing with sex education and venereal diseases. In 1922 the section of War Risk Insurance in this Department made a motion picture, and at intervals have appeared from the same quarter reels demonstrating the splendid work of the U. S. Coast Guard.

One proposal long dreaded by operatives in the Government film divisions because of political implications, came seriously to a head in May, 1937, when William Theodore Schulte, Democrat from the First Congressional District of Indiana, introduced a bill in Congress intended to consolidate all of Uncle Sam's motion picture production in the Government Printing Office. Congressman

Gilbert Tucker's Yankee fondness for gadgets may account for the variety of film techniques in his novelty shorts for New York State.

Schulte estimated that the annual expenditure for this purpose, on the existing plan, ran to about a million dollars. He proposed placing the work under a trained, practical motion picture engineer, who would receive $8,000 per annum, with three qualified assistants at $4,800 each. No especial action was taken in the matter, but the situation received a large amount of unwelcome publicity. In one form or another the Schulte proposal may be expected to reappear at every political opportunity for embarrassment of the Bureaus. A similar bill was introduced the very next year, in January, 1938, by Senator Elmer Thomas, of Oklahoma.

State Specialties

VARIOUS individual State governments have undertaken their own film production, among them those of Ohio, Massachusetts, California, Illinois, Wisconsin, New York, Pennsylvania and New Jersey. The last-named has a considerable library available to the public through its Department of Conservation and Development at Trenton. The Virginia Fisheries Commission made the first of a series in color in 1939. The California Division of Fish and Game has approximately fifty reels on its list. The Pennsylvania Fish Commission has many subjects including much footage shot by cameramen from Eastern Film Corporation. Representing that same concern I once journeyed to Wilmington to discuss with two State senators a proposed but still unproduced series for Delaware. Enthusiastic consideration has been given to a project for exploiting Mississippi in films, former Governor Dennis Murphree leading the ayes.

Illinois received its first practical impetus to State production during the gubernatorial administration of Frank O. Lowden, from 1917 to 1921. Lowden was keenly interested in fine-bred cattle, and the initial release was "The Foster Mother of the World," featuring the cow and made by the Division of Dairy Husbandry. Lennington Small, the next Governor of Illinois, was a farmer and, greatly impressed with what the first film had accomplished, he recommended motion picture production to all other State departments. The Department of Public Welfare responded with a series on institutions under its control, and the Department of Highways and Waterways with a film on road-making and traffic safety. The well organized Illinois State educational film library has had these and numerous other reels in constant circulation.

New York State has made motion pictures with fair regularity, including a series through the Marketing Division in 1920 to educate the public in food-buying methods. Particular attention has been earned by the work of the New York State Department of Health, where Gilbert M. Tucker, Jr., for fifteen years in charge of the Division of Exhibits, long made use of small appropriations to produce useful films. Most of his ingenious other exhibits he constructed with his own hands in a home workshop. I speak of Tucker out of a long, first-hand, admiring acquaintance, for I assisted Carlyle Ellis to make several of the Department of Health trailers. Ever receptive to the use of novel techniques, Tucker was responsible for much of the popularity of silhouette, cartoon and stop-motion treatment of films in the health field. It was for what later became his Division that the Edison Company produced "The Trump Card," a reel on impure milk, in 1916. In the autumn of 1937 he added to his pioneer status by having one of his films "televised."

Tucker was born at Albany, New York, the State capital where he was to serve for so long a time. He was originally a specialist in agriculture, having come of a family of authoritive writers on that subject. His father was editor of *The Country Gentleman*; and it was that celebrated farmer's weekly that gave him employment after his graduation from Cornell in 1901. His abilities were especially valuable during the First World War, throughout which distressing period he served in the work of

(*Continued on page* 21)

COMMITTEE ON FIELD EXPERIENCES

WILLIAM W. WATTENBERG
Chairman, Chicago Teachers College

FINANCING has always been one of the problems in schools making use of long distance field trips. Recognized as valuable to give young people a broad understanding of the America they live in, these trips are taken by comparatively few schools largely because financial considerations stand in the way.

Here in a letter written from one school principal in a small town in Illinois to another, a letter of advice never intended for publication, we have an example of the ingenuity which can enable a school to raise the necessary funds.

Now that war is upon us, the schools will undoubtedly have to do their share in raising funds for the Red Cross and for other defense activities. The suggestions contained in this letter will be helpful for that purpose as well. The collection of waste paper, mentioned in the letter, will be recognized as a conservation activity requested by governmental agencies. Add to this suggestion the collection of waste metal of various kinds, and the discussion of the use of that metal or the paper in class, and we again have a pattern of education, through socially useful work, emerging. W.W.W.

Media Township Community High School
Media, Illinois
JAMES B. JACKSON, Principal

"Dear Alvin:"

I have been rather tardy getting around to sending you the information you asked for over the phone the other day. I only hope that I am not too late for it to be of some use to you. If I understood you, the thing you wanted was information concerning the way in which we raised money for the Senior trip.

First of all, I might tell you that the Senior Class pays out of its funds the actual cost of transportation, bridge tolls, etc., and the cost of any conducted tours. This usually amounts to two hundred fifty or three hundred dollars ($250 or $300) altogether.

Several plans have been used here and in this vicinity for raising funds, and I am including not only the plans that we have used, but also some which I am contemplating and some which I know have been used successfully in neighboring schools. Our most profitable scheme so far has been our Senior Corn Wagon. This year we sent out the double postal cards to a mailing list of some two hundred fifty patrons of the school. The mailing list was made up from persons who had shown interest in the Senior trip in years before, and of course included the parents of farm children in school. The card carried a message from the president of the Senior Class stating the purpose of the trip and asking if the person addressed would like to contribute corn to our fund. The reply card, of course, provided space to indicate the amount of corn to be given. We sent these cards out on Thursday of last week, and to date, we have received contributions of over one hundred bushels of corn, so you can see it works.

Another plan that we are contemplating is to solicit ungleaned fields that have been picked by corn-pickers, and then during Christmas vacation, (which is two weeks here) both boys and girls from the Senior Class will glean and turn that corn into the fund. We have also served lunches at farm sales. We made about thirty-five dollars ($35.00) on one sale, and none of the food was donated. Then, of course, we have a Senior play and usually one dance each month which is open to the public.

There are several other ideas that I think are pretty good. One is the bakery sale which would be conducted somewhat similar to the Corn Wagon idea. The patrons of the school would be solicited by a postal card for their baked goods. The students would collect it, and on an advertised date would do the selling.

One of my neighboring Superintendents tells me that he runs a Senior Junk Wagon instead of a Corn Wagon. Of course, he takes up "rags, bottles, and old iron" besides anything else of slight value which the people want to get rid of. One project that can be worked out at school and which we are doing now is the baling of all waste paper and saving old magazines and newspapers from the school library. This doesn't net very much, but it helps.

I thought of a good idea the other day which I believe would work in a community which was already sold on the idea of contributions. The plan was to print up a number of gilt-edged securities in as attractive a style as possible, and offer them in denominations of one dollar, two dollars, five dollars, or ten dollars. These would simply be certificates to the effect that the holder thereof had donated a certain sum of money for financing the Senior trip of such and such a year.

One idea that I had hoped to work out this year, but didn't, was a hobby class during the summer composed of the youngsters who would be Seniors this year, and having those people work on various projects which would be saleable. Then at the various activities here, such as ball games, carnivals, dances, etc., display this material and offer it for sale.

I have thought too of some type of bazaar or white elephant sale to be held at school, either in the fall or early in the spring, so that it could be held outdoors. I have a few other ideas not very well developed yet, but I think this is enough to give you some indication of what we are doing here.

One of the most important things, I think, to bear in mind in any community is that the public must be back of the project whole-heartedly, or any money-making scheme is bound to fail, and unless that spirit of community cooperation is already established, a good deal of local publicity is needed before a campaign of the above kind can be launched. Of course you know this without my telling you.

If you run into any ideas for raising funds that sound like they would work, I would appreciate your passing them along to me.

Sincerely,
"Jim."

LAS MAÑANITAS
A--ma--po---la per-fu--ma--da de los lla--- nos de Te
Las jovenes se arrodillan y exhiben sus jicaras. Cantan su alabanza « Jicaras jicaras de Michoacán »
1
2
EL VENADO Los danzantes llevan mascaras de cabezas de venados Imitan los movimientos del venado cuando va a beber
3
Tiendle la ropa en un maguey a secar
4
El hombre tiene prisa
7
El padre va al mercado con su burro cargado de naranjas
5
DENTISTA
El niño visita al dentista de mala gana
8
¡Esta es Maria. Lleva una falda azul y una blusa blanca.
6
El niño asiste al cine de buena gana
9

From the Filmstrip Series on

INTRODUCTORY SPANISH

produced by

THE SOCIETY FOR VISUAL EDUCATION, Inc.

Chicago, Illinois

The entire series consists of ten units. Scenes reproduced above are: (1) (2) (3) from the unit on "Dances and Music"; (4) (5) (6) from "A Family of Mexican Peons"; (7) (8) and (9) from "Idioms and Expressions of Courtesy."

The Literature in Visual Instruction

A Monthly Digest

Conducted by ETTA SCHNEIDER

STATUS AND TRENDS

Is There Such an Entity as Visual Education?—B. A. Aughinbaugh, State Supervisor of Visual Instruction, Columbus, O.

A bit of retrospection from a pioneer in the "visual education" movement. The author documents his belief that the motion picture is the greatest aid to communication of ideas, especially since it uses our visual sense which is the strongest of our "educative" senses. The use of motion pictures for education, Mr. Aughinbaugh contends, should be termed "visual communication."

Educational Films Today—and Their Future—Charles F. Hoban, Jr., *Cal. Journal Sec. Ed.* 16:395-9 Nov. 1941.

Two forces are in conflict (with respect to the future outlook of educational films)—those of efficiency in social function and those of economy in dollars and cents. If the former proves the stronger . . . . . motion pictures will assume a place of much greater importance in the American educational program. If . . . the latter, growth in educational utilization of motion pictures is likely to be arrested for the next decade or two.

There are at least four lines of evidence that indicate a growing awareness of the power of motion pictures—

1. The growth in the amount of projection equipment and of film libraries. The recent government survey shows at least 6,000 sound projectors in schools; in the Southeast alone, Georgia, Florida, North Carolina, South Carolina, Tennessee, Louisiana and Virginia have established libraries.
2. The increased supply of films being released for school use, by government bureaus, universities, philanthropies, commercial producers and by release of films from the vaults of Hollywood.
3. The development of films for defense-training and vocational training by government agencies.
4. The natural development that arises out of needs of national morale and civilian training programs. There is most to be done along these lines.

Educators face the responsibility of promoting the wise use of films, namely, a) using films for educational and not for recreational purposes; b) establishing school film libraries; c) buying projection equipment before the shortage becomes too acute and d) assuring teacher-efficiency in integrating films into the school program, thereby gaining public approval.

ADMINISTRATION

Visual Education—An Actuality—Paul L. Anderson—*Montana Education* 18: 15, Dec. 1941.

Facts and figures on the newly-established state film library in Montana. A grant of $6000 for each of two years, 1941 and 1942, was made by the State Legislature. The director, Harry K. Norton, traveled over the state and elsewhere to observe libraries already in existence. The film library is part of the state department.

Each school is asked to deposit one film, thus the full cost becomes $50 per year to a school. There are now 150 sound and silent films available, valued at $4000, for the library. Next year it is hoped to have $10,000 worth of films.

Contribution of Films to a School Program—Curtis E. Warren, Santa Barbara, Supt. of Schools—*Cal. Journal of Sec. Ed.* 16: 400-3 Nov. 1941

Motion pictures have become an added tool of learning for the Santa Barbara developmental curriculum, by helping to promote the objectives previously established as essential to the education of boys and girls. Films helped to develop in children an understanding of the immediate enviroment, and the ever broadening world environment. The medium was found to be effective at all age levels, but dependent upon the pupils' experiential background and skill of teacher for effectiveness. Films helped to stimulate critical thinking along many fronts. Other values growing out of the project are: increased vocational orientation, teacher growth in interpreting and evaluating the curriculum program, and improved public relations.

Running a School Motion Picture Program—Roscoe C. Lyons, Santa Barbara High School—*Cal. Journal Sec. Ed.* 16: 404-6 Nov. 1941.

By means of a question-and-answer approach, we are informed that at this high school, during the Evaluation Project, the following conditions prevailed: 1) A silent projector and a sound projector were sufficient to show 50 or 60 films a week. 2) Several rooms should be darkened so that pupils need not be moved about. 3) Licensed student operators assist in projection and in delivering equipment. 4) Orders are placed through the Visual Aids Department. 5) Films should be previewed.

The Need for a Coordinated Service Department—Don Williams, Berkeley High School—*Cal. Journal Sec. Ed.* 16:406-9 Nov. 1941.

A convincing argument for centralization of responsibility within a school. The author has reported his own activities in this connection in the The *Clearing House* (reviewed in December).

Motion Pictures: Yes, We Run a Movie Show!—L. W. Richards, Biggs, Calif. —*Sierra Educational News,* Nov. 1941 p. 28.

A description of a carefully-planned noon hour film program which is operated by school funds. Some health educators may take issue with the claim that it is better for young people to see films during lunch hour than to engage in outdoor sports.

EVALUATION AND RESEARCH

Evaluating Films Used in the Classroom—Leo F. Cain, Nat'l Training School for Boys, Washington, D. C. —*Cal. Journal Sec. Ed.* 16:410-12 Nov. 1941.

Especially valuable are the principles of good usage which teachers formulated after a two-year program: 1) There must be a definite curriculum purpose for using a motion picture. 2) The film must be an integral part of the classroom work. 3) There should be time for child reaction to the future. 4) The teacher should guide the work in the developing of the recognized purpose. 5) Free and spontaneous reactions should follow a showing. 6) Opportunity should be given for raising of new problems, altering of old ones or the setting of new purposes.

Specific Contributions of Films to Science Teaching—Abram VanderMeer, University of Chicago—*School Review,* 49:693 Nov. 1941.

A critical review of research studies that are well-known to readers of EDUCATIONAL SCREEN. The author challenges some of the conclusions of researchists, but agrees that films have a strong possibility for: a) transmitting facts; b) helping pupils to think clearly and organize ideas; and c) saving time in the learning process.

STILL PICTURES

Elements in Geography Readiness—Gertrude Whipple, Detroit, Mich.—*Elementary School Journal,* 42:25-67 Dec. 1941.

This article describes an investigation to determine when teachers and supervisors regard the child as "ready" for learning geography concepts. Among the statements submitted by educators from all parts of the U. S., there was great agreement (98%) on the fact that "an inquiring attitude toward things seen in pictures and not understood" was a good indication that the child is ready to learn geography.

In answer to the question "What experiences do children need as part of their background for 'geography readiness'?" there were listed—adequate experimental background; interests other

than reading, etc. A significant type of experience for the consideration of our readers was the "ability in interpretation of pictures" (mentioned by 10%). Further analyzed, this ability was seen as: ability to use pictures as a source of information, to note details, to select pictures bearing on a specific subject, to tell about pictures in a few connected sentences, to tell a story in a series of related pictures; appreciation of the aesthetic values of pictures; appreciation of having experienced what is shown in certain pictures; habit of reading captions to pictures.

This study points out the importance of teaching children how to read and use the understanding gained from pictures as preparation for understanding geography. It is just as important in understanding the daily newspapers, and in interpreting life situations all about us.

Building America: *America's Outposts.* Vol. 7, No. 3. Dec. 1941.

The most recent issue of this important periodical is an excellent basis for beginning the intelligent study of geography pictures, as suggested by the article reviewed above. Although it went to press before the outbreak of war, this issue of *Building America* shows through excellent pictures, maps and text the importance of our Pacific and Atlantic possessions and what it is that the inhabitants of Hawaii, Philippines, Alaska and other islands have to defend. Sources of information and materials are given.

Let Pictures Tell the Story—Gloria McIntire, Counselor, Los Angeles City Schools—*Occupations* 20:124 Nov. 1941.

A description of the way in which photographs from magazines, newspapers, or advertisements can be mounted and simple text added for imparting vocational information to retarded pupils.

PHOTOPLAY APPRECIATION

Movie Critics Are Made, Not Born—Floyd L. Smith, Principal, Woodruff School, Ypsilanti, Mich.—*School Executive* 61:34 Dec. 1941.

This article describes a movie appreciation study made by all grades in an elementary school of 350 pupils. Each grade participated in the selection and evaluation of each feature film shown, although there was variation in each room depending upon the maturity and interests of the group.

The "course" is financed by the Board of Education, amounting to about 30c per pupil. Here is how it was organized: A committee of teachers and representatives of each grade selects 15 feature films for the year. When the film arrives, the preview committee (which is changed from time to time) looks at the film and discusses ways and means of making the showing most enjoyable. They then prepare questions for discussion to be introduced to their respective classes. The showing of the film and the discussion period following take half a school day each week. The group is developing standards of discrimination which are noticeable in their movie-going habits outside of school.

History Directs the Movies—Kurt Pinthus, Institute of Social Research—*American Scholar* 10:483-97 Autumn, 1941.

A resumé of the trends in American and European motion picture production in the last 20 years. The author cites titles of films to show that producers have been influenced by world conditions—war, depression, and the like—in their choice of themes. However, the manner in which these topics were treated in movies has varied in sincerity and in effectiveness.

The Motion Picture—Iris Barry, Edwin Zeigfeld, Milton S. Fox—National Society for the Study of Education 40th Yearbook Chap. XIV. 1941.

A discussion of the motion picture as a popular art.

SCHOOL-MADE FILMS

Movies Tell School Story—Charles A. Gramet and Joseph T. Shipley, New York City—*Nation's Schools,* Nov. 1941 p. 66.

A very brief account of a very detailed production program in which all aspects of the education of a million children were illustrated through carefully-planned film scenarios.

School-Produced Motion Pictures—Robert E. Jewett, Ohio State U.—*Social Studies* 32:321 Nov. 1941.

An interesting account of a school filming project that was superior to the slapstick comedy efforts of some adolescents. The Hi-Y Club of North High School, Columbus, Ohio, decided to study and film the housing situation in their own city. They showed slum conditions and the relation of housing to child delinquency, disease and tax burdens. The author lists several of the generalizations which the pupils made after the project was over. They are certainly worthy of the time, effort and money.

NEW BOOKS

A Course of Study in Radio Appreciation—Alice P. Sterner, Barringer High School, Newark, N. J.—Educational and Recreational Guides, Inc., 1501 Broadway, N. Y. 1941 36 pp. $1.00.

This monograph appeared serially in the monthly issues of the "Group Discussions Guide." It contains suggestions for an extended course in radio appreciation. The author has included 22 units but she does not believe it essential to include them in the order given. She recommends instead that the course be adapted to the local situation.

The topics concerning radio that high-school students may find challenging are: music programs, popular programs, sports, news, comedy, drama etc. Discussions dealing with advertising censorship, the radio industry and future developments constitute a large portion of the course. This course is well conceived and ably outlined and illustrated. It belongs in each school—upper elementary and secondary.

PERIODICALS

Motion Pictures in the Secondary School—California Journal of Secondary Education, Vol. 16, No. 7 Nov. 1941. Reginal Bell and Leo F. Cain, editors. (See also Jan. 1941 issue).

The contributors to this issue were concerned, in one capacity or another, with the Santa Barbara program of the Motion Picture Project of the American Council on Education.

SOURCES

Audio-Visual Aids for Adult Education James W. Brown, Virginia State Director of Audio-Visual Aids—*Adult Education Bulletin* quarterly.

Picture File Pointers: Source Material for the School Librarian—Norma Olin Ireland, El Monte, Cal.—*Wilson Library Bulletin,* Nov. 1941, p. 258.

Prepared by the School Libraries Section of the American Library Association. This compilation lists sources of pictures and a bibliography for persons interested in mounting and filing flat pictures.

Aids to Democracy: Radio, Movies, Press—a reprint of three articles by Edgar Dale, which appeared in the *News Letter* during 1940-1941. Published by the Bureau of Educational Research, Ohio State University, Columbus. 21 pp. 25 cents.

In the Introduction, Dr. Dale states that "the radio and movies are unusually effective instruments of mass communication . . . Such potential power for the spread of democratic ideas should be harnessed—but how?" The answer to this question is discussed in the pamphlet.

The list of "Sources of Inexpensive Teaching Aids," compiled by William G. Hart, is also included.

Motion Pictures—Not for Theatres

(*Continued from page* 17)

food control. He retired from the Department of Health about 1939 to live on his pleasant farm at Glenmont, New York, not far from the city of his birth and long occupation. His abiding, congenial interest in the good earth doubtless accounts for his allied absorption in matters of property, evinced by the recent publication of his highly readable book *The Path to Prosperity,* which arose otherwise out of his burning enthusiasm for Henry George.

Valuable New York State work in the utilization, as opposed to the production, of educational pictures was accomplished by Dr. Alfred Abrams, who died at his Albany home April 2, 1938, aged seventy-one years. As far back as 1909, after extended service as principal, superintendent of public schools, and State inspector, he was appointed Director for Certification of the Division of Visual Education of the State Department of Education, a post which he held actively until his honorable retirement in 1934. Ward C. Bowen is the present Chief of the New York State Bureau of Radio and Visual Aids.

(To be continued)

Light in Hand-Made Lantern Slides

By ANN GALE Lindblom High School, Chicago

SCIENCE reading material is usually too difficult for the upper elementary grades. The material may be presented in an easy way by means of lantern slides. The following unit on light may be used for upper grades.

1.) Light is energy because it makes things change. Light gives the energy to plants to manufacture sugar and starch; it causes a change in your eyes giving sight; it sunburns and thus changes your skin.

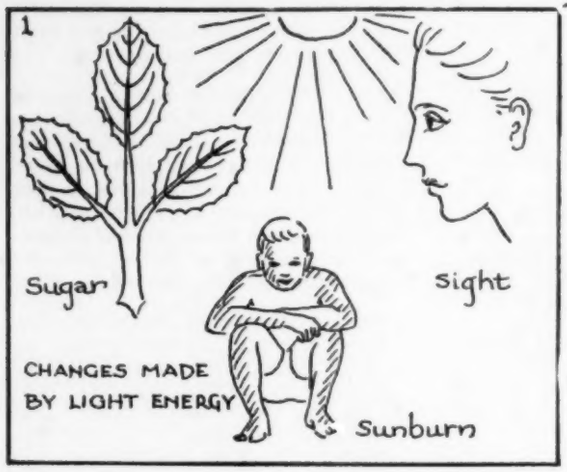
2.) Light travels in a straight line. Objects in front of the source of light cause shadows like the shadow of the earth on the moon in an eclipse, or a shadow picture.

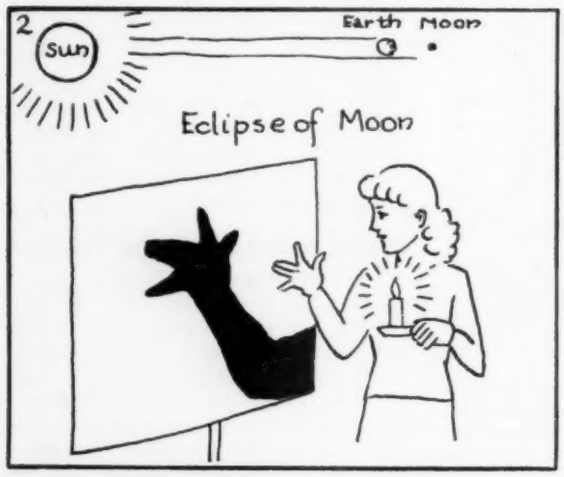
3.) Mirrors reflect light. Because light is reflected one can see objects above him with a periscope.

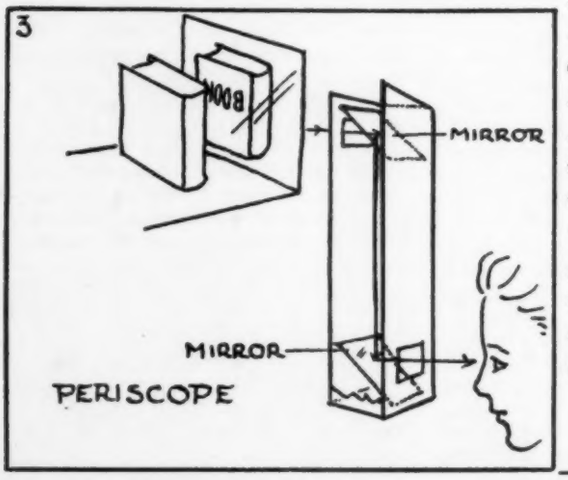
4.) Dark objects absorb most of the light rays. Light objects reflect most of the light rays. A colored object absorbs all the light rays except those of the color seen.

5.) The foundation of all interior decoration is the fact that light colors reflect light and make objects seem larger while dark colors absorb light and make objects look smaller.

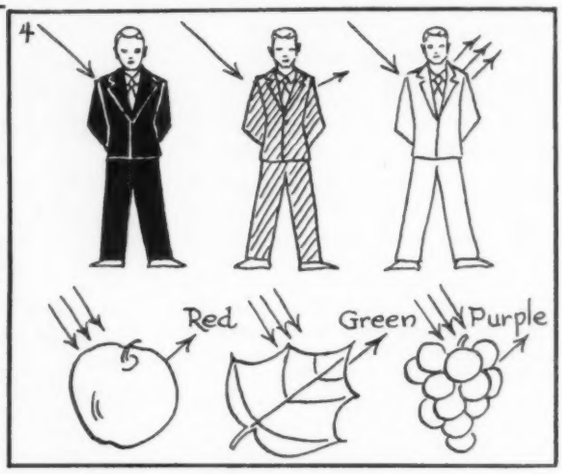
6.) Light rays may be bent and brought to a focus by means of lens. A camera with its lens focuses light on the film. The lens in your eye focuses light on the retina.

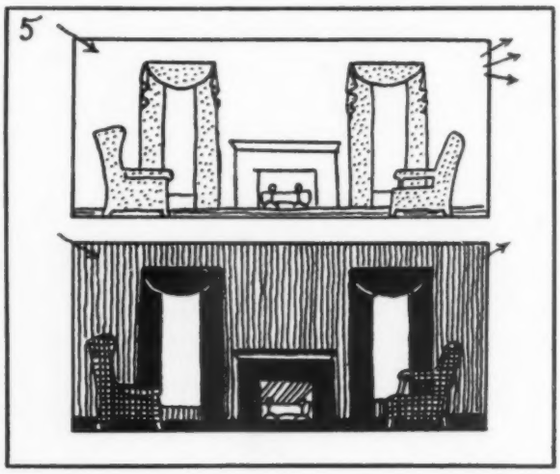


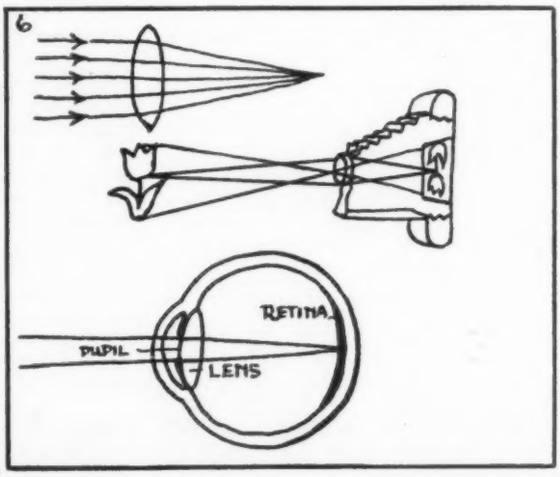




The simplest type of hand-made slide is made by drawing or tracing on finely finished etched glass with ordinary medium lead pencil. Color, by special crayons or inks, enhances the slides greatly. Fine effects are obtained by blending with crayons. About one-third inch margin should be left all around the slide. The slide is readily cleaned with soap or washing powder to receive a new picture.







Among Ourselves

Notes from and by the Department of Visual Instruction of the National Education Association.

Conducted by JAMES D. FINN
Colorado State College of Education, Greeley

DVI President Called to Government Work

President W. Gayle Starnes has been given leave by the University of Kentucky to take up his new position as Civilian Training Administrator at the Lexington, Kentucky, Signal Corps. We are happy to report, however, that he has received permission to continue as President of the DVI.

A Veteran of the Visual Field Retires

With the retirement of John A. Hollinger in September, 1940, the Pittsburgh Public Schools lost a great Director of Science and Visualization, and the visual field lost an outstanding leader. We, personally, miss him as a friend for more than twenty years. We shall miss his independent thinking, his scholarly discernment, his straight-from-the shoulder utterance, and his readiness to help in any emergency.

Dr. Hollinger's department constituted one of the first moves on the part of a large school system to recognize the value of visual aids as a definite part of the educational program. Prior to this he had served as a school principal in Pittsburgh for twelve years. With his retirement he rounds out a service of thirty-four years in the Pittsburgh schools, a total of forty years in active educational work, and more than two decades of service specifically in the field of "perceptual aids to learning," Dr. Hollinger's own term for the conventional "visual education."

He is a past president of the old National Academy of Visual Instruction, and of the Department of Visual Instruction of the National Education Association. He has contributed numerous professional articles, and has been greatly in demand as a speaker and conference leader. He has conducted courses for the Pennsylvania State College, the University of Denver, the University of Pittsburgh, and Allegheny College. He cooperated in the organization of the Association of School Film Libraries, and has been a member of the Board of Directors since its beginning.

Dr. Hollinger's future plans include a vigorous pursuit of his hobbies, horticulture and golf. Thousands who knew him throughout the country will sincerely wish him many happy years of well-earned retirement.

N.L.G.

New Appointment for Hoban

Charles F. Hoban, Jr., has been appointed Special Assistant in the Division of Visual Education of the Philadelphia Public Schools, succeeding Dr. John T. Garman who became Director of the Division upon the death of Dr. James G. Sigman a year ago.

Mr. Hoban reports the work of the Philadelphia Visual Division is expanding to include the supervision of radio education in addition to school journeys, motion pictures, slides, and transcriptions. He will continue to serve as Director of the Motion Picture Project of the American Council on Education, which he joined in 1936. Prior to that Mr. Hoban taught at Clarion State Teachers College and in the high schools of Harrisburg. He received his Ph.D. from Duke in educational psychology in 1935 .

From the National Secretary

H. J. Daily, National Secretary, has mimeographed copies of the Constitution and By-Laws of the Department for distribution to the zonal secretaries. These in turn are to be furnished to new members as fast as they come in.

The national office reports that the membership campaign is coming along very well but that some zones are out in front. Next month we hope to give you a zone by zone account of the membership campaign.

The following is a list of the secretary-treasurers for the various zones. Anyone interested in becoming a member should communicate with the secretary of his zone.

Zone I: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont (Secretary—Howard A. Smith, 208 Churchills Lane, Milton, Massachusetts)

Zone II: Delaware, Maryland, New Jersey, New York, Pennsylvania, Virginia (Secretary—Don Carlos Ellis, 21 West 46 Street, New York, New York)

Zone III: Indiana, Kentucky, Michigan, Ohio, West Virginia (Secretary—Wallace L. Arnholt, Bellevue City Schools, Bellevue, Ohio)

Zone IV: Illinois, Iowa, Missouri, Wisconsin (Secretary—Lewis V. Peterson, Visual Aids Service, University of Illinois, Urbana, Illinois)

Zone V: Minnesota, North Dakota, South Dakota (Secretary—Donald K. Lewis, Central High School, Red Wing, Minnesota)

Zone VI: Idaho, Montana, Oregon, Washington (Secretary—Glenn C. Jones, Acting Secretary, Director, Division of General College Extension, State College of Washington, Pullman, Washington)

Zone VII: Arizona, California, Nevada, New Mexico (Secretary—George M. Jamieson, Jr., Eureka City Schools, Eureka, California)

Zone VIII: Colorado, Kansas, Nebraska, Utah, Wyoming (Secretary—James D. Finn, Director, Audio-Visual Education Service, Colorado State College of Education, Greeley, Colorado)

Zone IX: Arkansas, Louisiana, Oklahoma, Texas (Secretary—Paul V. McRoy, 1500 Louisiana Street, Houston, Texas)

Zone X: Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, Tennessee (Secretary—Bernice Mims, Department of Visual Instruction, General Extension Division, University of Florida, Gainesville, Fla.)

A PLEA TO ZONE OFFICERS

We are not yet receiving enough material from the various zones to make "Among Ourselves" the column we want it to be on the activities of the DVI. Won't you please, therefore, communicate with me as soon as possible regarding activities in your zone? J. D. F.

Zone II

E. Winifred Crawford, President, reports that the campaign in Zone II is taking a different direction than in most of the other areas. Negotiations are underway to see if some arrangement can be made whereby the powerful New Jersey Visual Education Association may be affiliated with Zone II. If this affiliation is successful, Zone II will no doubt become one of the outstanding sections of the organization.

The New Jersey Association publishes a visual aids bulletin four times a year which contains a great deal of vital information for workers. The format is such that pictures and diagrams may be reproduced. The Association held its annual convention on Saturday, Sunday, and Monday, November 8, 9, and 10 at Atlantic City. Included on the program were a series of motion pictures, a business meeting, and illustrated presentations of life and customs in remote geographical areas. The New Jersey Visual Education Association also produces an annual bulletin known as the *Visual Aids Digest*. This excellent publication, with emphasis on practical applications of visual aids, may be obtained by contacting Miss Crawford.

Another item of interest from Zone II which has possibilities for membership drives is quoted direct:

"One supervising principal of a small community in New Jersey has had his local board of education pay the membership for Zone II of a teacher from each of his three schools."

Zone IV

L. W. Cochran, President, reports that the Executive Committee of Zone IV is carrying on a campaign throughout the four states of Illinois, Wisconsin, Missouri, and Iowa. The campaign is designed to further audio-visual instruction in the area, as well as the activities of the DVI. A number of different programs were placed by the organization on state educational meetings during the fall, and the zone organization will be functioning full force as this goes to press.

The official annual meeting of Zone IV will be held in Chicago in connection with the Midwestern Forum on Visual Teaching if present plans can be carried to completion. The probable dates of the Zone IV meeting will be March 27 and 28, 1942.

Zone V

The news from Zone V came to us indirectly through the publication, *News Bulletin*, from the Bureau of Visual Instruction and the Visual Education Service of the University of Minnesota.

According to an item in the bulletin, a membership campaign is underway under the direction of the Zone President, Miss Ella Callista Clark, Winona State College, Winona, Minnesota. An appeal is being made for members, using the subscription to the EDUCATIONAL SCREEN as the drawing card.

Won't you let us hear more from Zone V?

Zone VI

While nothing has been reported to us directly from Zone VI, it is interesting to note that the Washington-North Idaho branch of the DVI is functioning. At a meeting of this sub-organization held in Ellensburg at Central Washington College of Education on November 1, *Reel News*, published by the Bureau of Visual Teaching at Washington State College, Pullman, was designated as the official publication for the organization. Committees of the Washington-North Idaho branch include producer relationships, exchange of material, correlation of audio and visual aids, and distribution problems. Each committee chairman made a report on the work of his committee.

According to the report of the meeting, some discussion was held on the relationships of the branch organization to Zone VI and also the Inland Empire Education Association. As a result of the discussion, it was decided that the branch shall function as a group within the structure of Zone VI. Relationships will be clarified after a conference with the Executive Committee in February. Glenn Jones of State College of Washington is secretary both of the branch and of Zone VI.

Zone VIII

The first annual meeting of Zone VIII was held at the University of Colorado in Boulder on December 29 and 30. The general theme of the conference was "Practical Suggestions for Teachers and Administrators in Planning and Executing a Visual Instuction Program." Program items included "Administration of an Audio-Visual Program in a Small City School" by Arthur L. Payne, Director of Visual Instruction, City Schools, Greeley, Colorado; "Kinks, Twists, and Shortcuts" by Harold L. Walton, Director of Visual Instruction, Public Schools, Garden City, Kansas; "Presentation of a Silent Motion Picture" by Vera Kalal, Chairman of the Visual Education Section, Third District, Nebraska State Teachers Association; "Colored Still Pictures in the Classroom" by Clinton Larson, Public Schools, Salt Lake City, Utah; "Integration of the Sand Table, Relief Models, and the Map in Geography" by H. A. Hoffmeister, Associate Professor of Geography, University of Colorado, Boulder; "Visual Aids in Reading" by Paul McKee, Professor of Elementary Education, State College of Education, Greeley, Colorado; "The Radio in Education" by Robert Hudson, Director of the Rocky Mountain Radio Council, Denver; "Demonstration Lesson Using a Recording in a Teaching Situation" by Douglas Ward, Associate Professor of Secondary Education, State College of Education, Greeley, Colorado.

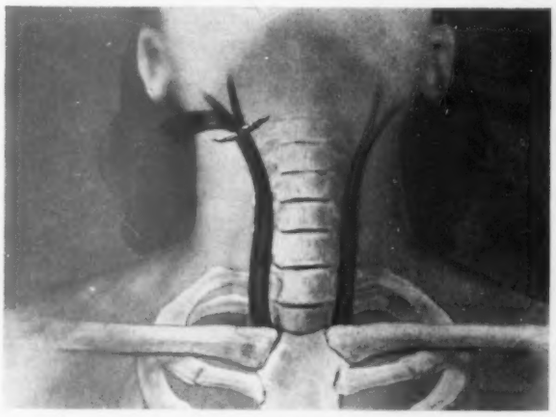
In addition to these program numbers, a long business meeting was held and the organization of Zone VIII was completed. It was decided to urge the national organization to make the fiscal years of the NEA and the DVI the same, and that the entire organization become more closely affiliated with the NEA. Laramie, Wyoming, was chosen as the place for the next meeting. It was decided to hold the annual conferences in the home state of the new president. The order in which the conferences are to be held is as follows: Colorado, Wyoming, Kansas, Utah, and Nebraska. Officers are to be elected by mail ballot. The first election will

ERPI'S DEFENSE TRAINING FILMS

Eight Releases for Immediate Delivery

TITLES

Theory of Flight
Problems of Flight
The Weather
First Aid
Eyes and Their Care
Body Defenses Against Diseases
Home Nursing
Foods and Nutrition



If the large artery in the throat is severed, press fingers firmly beneath the wound, with thumb back of the neck.
(From the Production "First Aid")

Also Available:
TWENTY RECORDINGS ON THE GROWTH OF DEMOCRACY

BRING THE WORLD TO THE CLASSROOM

For Complete Information Write
Department ESJ2

Erpi Classroom Films Inc.

1841 Broadway, New York, N. Y.

be for the balance of 1942 and as much of 1943 as coincides with the fiscal year.

Although attendance at the meeting was small due to the terrific storm in this part of the country, the meeting was conceded by everyone to be extremely successful. The membership campaign was considered at length, and various members of the organization agreed to get ten new members during the year.

Zone X

Secretary Don White furnished us with copies of the minutes of the meeting of the Executive Committee. The meeting was held at the Ansley Hotel, Atlanta, Georgia, in November, in connection with the Southern Conference on Audio-Visual Education. After a lengthy discussion of possible steps to be taken in the membership campaign, the committee outlined several steps to be followed. Because these procedures might offer suggestions to other zones, they are included as a direct quotation.

1. Each member of the Executive Committee is to be asked to undertake the solicitation of memberships from about 25 persons in his area who should be particularly good prospects for membership in the Department. These contacts may be made by individual letter, or in person.

2. A mimeographed letter soliciting membership, and suitable for general mailing by all Executive Committee members, is to be prepared by the Secretary of the Zone. Blank spaces are to be left for address and for signature. Any desired quantity of these, with envelopes, will be sent to each Executive Committee member, to be addressed, and mailed to prospective members.

3. The Secretary is to supply copies of the printed DVI leaflet together with application forms. These are to be supplied for use as enclosures with the letters soliciting memberships, and for other mailing.

Zones 1, 3, 7, 9

Why don't you let us hear from you? J.D.F.

February Meeting of D.V.I.

Mr. Boyd B. Rakestraw, Assistant Director of the Extension Division, University of California, Berkeley, is working on the program for the winter meeting of the Department of Visual Instruction, to be held on Monday and Tuesday, February 23-24, in the Veterans' Building in San Francisco.

The general theme of the program is "Visual Aids to the Emergency." Those speakers who have accepted the invitation to appear are:

Mr. Kenneth MacGowan, Director of Production, Motion Picture Section, Office of Coordinator of Inter-American Affairs, who will talk on "The Motion Picture Industry in National Defense."

Colonel W. P. Burn, Office of Civilian Defense, Washington, D. C., whose subject will be "Audio-Visual Aids and Civilian Defense."

Dr. Frank Freeman, Chairman, Department of Education, University of California, who will address the Tuesday luncheon group on the topic "Implications for Education."

Mr. Thomas Rishworth, National Broadcasting Co., who will speak on "Transcriptions in Education."

Pertinent Paragraphs on Perceptual Learning

WILBER EMMERT,
State Teachers College, Indiana, Pennsylvania

AN underlying principle of perceptual learning is that sensory experiences are necessary for mental activities. It is often forgotten, however, that sensations do not interpret themselves. Many teachers of "Visual Education" (Perceptual Learning, Audio-Visual Education, or whatever name is used for the course), as well as other classroom teachers, fail to realize that language has an important place and function in true education. Words are an important part of all learning. Words are necessary to interpret and clarify the simple percept, develop concepts, and attach them to the concepts derived from previous experiences and existing as memory images in the mental storehouse of the individual. Contrary to the belief of many "converts" to visual education, merely "exposing" a picture, an object, or a situation to a pupil or a class does not necessarily result in true learning. Words are an inevitable complement of all learning, and must be given their appropriate place in the learning process if true education is to be achieved.

Countless subjects and topics in the school's educational curriculum need both the descriptive explanation and the presentation of concrete materials to make them thoroughly understandable. Hence, teachers of Visual Education would do well to glean "pertinent paragraphs" on perceptual learning on each of the major units of the course as they read and study the General Psychology books and publications dealing with the psychology of specific subject—matter fields, and use them for distribution or reference assignments during the conduct of the course. In some cases the author will be stressing the function of word description, whereas at other times emphasis will be placed on the use of the concrete to clarify the word description given. In either event, sight is not lost of the importance of language in the true learning situation.

Need for the "Concrete" in Learning

For example, Stuart H. Rowe, in discussing *The Concrete as a Factor in Purposive Learning*, states:

"There should always be provided either actually or in imagination, the concrete situation which gives point and meaning to that which is taught. The unanimity with which the world's great teachers have used the parable, the fable, the dialogue, the historical illustration, emphasizes the value of the concrete situation for establishing truth. Any situation presents data of one sort or another. It may be organized with a view to the present adaptation, or its present significance may be disregarded in favor of a future possible situation for which more data are needed; or a general truth may be sought which is to adapt itself to so many applications in varied concrete situations that we are sometimes in danger of forgetting its definiteness in our contemplation of it as an abstraction. My idea of triangle is just as definite as my idea of any given triangle; the idea that all bodies are subject to the law of gravitation is psychologically just as definite as the thought that this pen is attracted in some degree by the moon. The definiteness of the abstraction is, however, approximately proportionate to that of the concrete example illustrating or contributing to it. Those truths that lack the red blood of concreteness, those that we fail to apply in our lives, have been aptly termed "bedridden truths", anemic, not for contact with men. Abstractions must not be regarded as necessarily hazy. When they are obscure, it is proof positive of an inadequacy in our experience, an inadequacy capable of removal only by more concrete experiences. In general, the more concrete the situations, the more definite the organization of them will be; and the history of education, like the history of philosophy and the history of religion, is witness to the general futility of attempting to organize abstractions without regard to the concrete data on which they are based, and the concrete situation, real or imaginary, to which they are to apply".

Magic in Graphs

In speaking of graphs and their functions, Henry D. Hubbard, National Bureau of Standards, Washington, D. C., says[1]:

"There is magic in graphs. The profile of a curve reveals in a flash a whole situation—the life history of an epidemic, a panic, or an era of prosperity. The curve informs the mind, awakens the imagination, convinces.

"Graphs carry messages home. A universal language, graphs convey information directly to the mind. Without complexity there is imaged to the eye a magnitude to be remembered. Words have wings, but graphs interpret. Graphs are pure quantity, stripped of verbal sham, reduced to dimensions, vivid, unescapable.

"Graphs are all inclusive. No fact is too slight or too great to plot to a scale suited to the eye. Graphs may record the path of an ion or the orbit of the sun, the rise of a civilization, or the acceleration of a bullet, the climate of a century, or the varying pressure of a heart beat, the growth of business, or the nerve reaction of a child.

"The graphic art depicts magnitudes to the eye. It does more. It compels the seeing relations. We may portray by simple graphic methods whole masses of intricate routine, the organization of an enterprise, or the plan of a campaign. Graphs serve as storm signals for the manager, statesman,

[1] Quoted from: Brinton, Willard C., *Graphic Presentations*, 1939

Teaching Films for Primary Grades
"Post Office," "Loaf of Bread," "Story of Milk," "Dinner Time on the Farm," "ABC of Puppets," "Boats of the Great Lakes"—and many others.
Write for Free Catalog No. 142
BAILEY FILM SERVICE
1651 Cosmo St. Hollywood, Calif.

engineer; as forceful engines of research for science, technology, industry; and as potent narratives for the actuary, statist and naturalist. They display the results. They disclose new facts and laws. They reveal discoveries as the bud unfolds the flower.

"The graphic language is modern. We are learning its alphabet. That it will develop a lexicon and a literature marvelous for its vividness and the variety of applications is inevitable.

"Graphs are dynamic, dramatic. They may epitomize an epoch, each dot a fact, each shape an event, each curve a history. Wherever there are data to be recorded, inferences to draw, or facts to tell, graphs furnish the unrivalled means whose power we are just beginning to realize and apply."

Stereograph and Stereoscope

Oliver Wendell Holmes, who perfected the stereograph and the stereoscope, once wrote:[2]

"O infinite volumes of poems that I treasure in this small library of glass and pasteboard. I creep over the vast features of Rameses, on the face of his rock-hewn Nubian temple; I scale the huge mountain-crystal that calls itself the Pyramid of Cheops. I stroll through Rhenish vineyards, I sit under Roman arches, I walk the streets of once buried cities, I look into the chasms of Alpine glaciers, and on the rush of wasteful cataracts. I pass, in a moment, from the banks of the Charles to the ford of the Jordan, and leave my outward frame in the arm-chair at my table, while in spirit I am looking down upon Jerusalem from the Mount of Olives."

I Am Photography

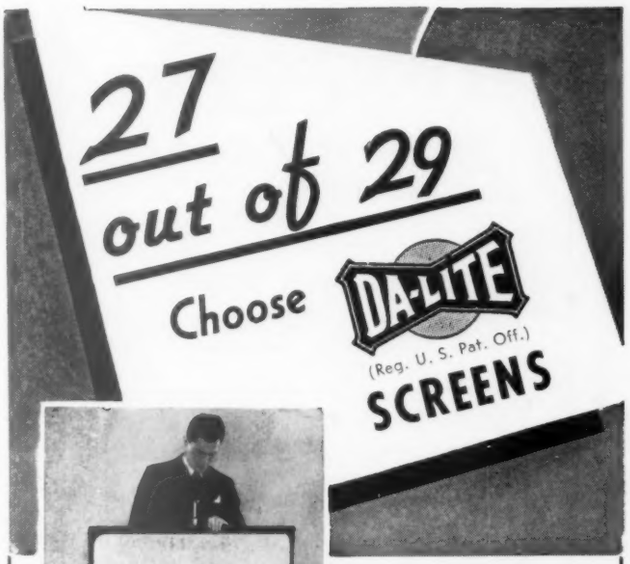
While the importance of Photography is generally recognized, the accompanying rare bit, *I Am Photography*,[3] is quite stimulating:

"I turn back the pages of the Book of Memory. I bring you thoughts of past years and old time friends. I keep forever green the happy hours of childhood. I dull the pangs of bereavement and blunt the edge of the grim reaper's scythe. I carry the news of the world, and bring you visions of far distant lands. Our modern civilization is largely dependent on my efforts. Though men may pass and empires crumble to dust, my magic will preserve their likeness for future generations. Not purse proud, I am within the reach of all. I solve mysteries impenetrable to mortal eyes; I ferret out the criminal when the other means have

---

[2] Quoted from: Dorris, Anna V., *Visual Instruction in the Public Schools*, pp. 137-138

[3] *Popular Photography*, January 1938, p. 8



For schools as well as industry THE DA-LITE CHALLENGER model, because of its greater convenience and durability, is America's most popular portable screen.

—as shown by
SALES MANAGEMENT'S SURVEY
of Industrial Film Users

In choosing a screen for your school movies or stills, consider the experience of leading users of industrial films. With thousands of dollars invested in their film productions, they are careful to select only screens that show their pictures at their best.

It is significant that the latest survey of these users reveals an overwhelming preference for *Da-Lite Screens*. The October 10th, 1941, issue of Sales Management magazine covering the leading business films of the year, shows that *of 29* companies which mentioned makes of screens used, *27 listed only Da-Lite*.

In industry, homes, schools, churches, theatres—wherever the importance of *brilliant, sharp pictures* and *utmost convenience* is recognized, critical buyers choose Da-Lite Screens—the leader for 33 years and now more popular than ever. Write for literature and name of nearest supplier.

PARTIAL LIST OF PROMINENT USERS

Armour and Co.
Continental Oil Co.
The Cleveland Tractor Co.
The Firestone Tire & Rubber Co.
Nash Motors Division, Nash Kelvinator Corp.
Illinois Central System
York Ice Machinery Corp.
Minneapolis-Moline Power Implement Co.
The Crosley Corp.
The Perfect Circle Co.
Chrysler Corp.
Ford Motor Co.
General Motors Sales Corp.
The Pure Oil Co.
Youngstown Pressed Steel, Division of Mullins Mfg. Corp.
J. I. Case Co.

DA-LITE SCREEN COMPANY, INC.
Dept. 1ES 2711 No. Crawford Ave. Chicago, Illinois

New BOBBY BREEN Features
In 16 mm. Sound

ESCAPE TO PARADISE

With Latin America as a background, this film abounds with exciting adventure, romance and tuneful melodies. Cast supporting Bobby Breen includes Kent Taylor, Marla Shelton, Joyce Compton and Pedro DeCordoba. 8 reels.

WAY DOWN SOUTH

A realistic story of Louisiana in the pre-Civil War days. Supporting Bobby Breen are Alan Mowbray, Ralph Morgan, Clarence Muse, Steffi Duna and Sally Blane. 8 reels.

Show these COLOR FILMS!

THE PHILIPPINES .....2 Reels, silent
HAWAIIAN ISLANDS .....1 Reel, silent
SINGAPORE .....2 Reels, silent
GREECE .....1 Reel, silent
YUGOSLAVIA .....1 Reel, silent
MEXICO .....3 Reels, sound
THE ELEMENTARY SCHOOL OF TOMORROW .....1 Reel, silent

Send for Catalog of 2200 Entertainment and Educational Subjects.

Walter O. Gutlohn Inc.
ENTERTAINMENT SOUND 16 MM FILM SILENT EDUCATIONAL
25 W. 45th St. Dept. E-1 New York

failed. I illuminate the pages of history, and make learning possible for the multitude. Born instantaneously in a ray of light, I become everlasting. As necessary in war as in peace, I am man's servant and yet his master. I am an art—and yet a business. I am photography!"

These "pertinent paragraphs on perceptual learning", word descriptions of a few of the items considered in the course on Visual Education, suggest what the writer has done to aid the students to more thorough mastery of the work of the course. They are a strong stimulus to extra "outside reading." During the present semester both the teacher and his students are on the alert for "pertinent paragraphs", and now have quite a large collection of such reference materials. While emphasis is here placed on the verbal selections, the importance of the concrete as a factor in purposive learning has never been neglected.

Correction

In the December issue of EDUCATIONAL SCREEN, the address for Dora G. Netterville, co-author of the article "Motion Pictures Utilized in College English", was incorrectly given. Miss Netterville is Assistant Professor of English at the Southwest Texas State Teachers College, San Marcos, Texas—not at the University of Texas, as stated.

Audio-Visual Enrichment of the Curriculum

(*Continued from page* 9)

year pupils. Dioramas, stereopticon slides, photographs and book illustrations of Indian life were shown. College students cooperated with Indian songs, and third year children sang, danced, and gave original poems—all interpreting Indian life. A lesson in Creative Expression followed, with these media—charcoal, paint, clay, crayon, colored chalk.

Often Audio-Visual programs result in individual and group research, as for example, when the 8B classes were eager to visit the Metropolitan Museum of Art to find the original Persian and Indian Miniatures in rich color in the beautiful Eastern books which they had seen in black and white on the screen, as background enrichment for the reading of Sohrab and Rustum. Or, when the seventh year pupils thrilled at finding copies of the Throne Chair of King Minos—yes! the very King of "Theseus and the Minotaur" or Bull of Minos—golden cups of that long ago time, even a wall painting in very bright colors of girl and boy toreadors contending with a very fierce bull. How exciting it is to visit a room filled with these treasures and realize that there was a real King Minos who lived in a palace on the Island of Crete over five thousand years ago, and that the well-known story of the hero, Theseus, King Minos and his daughter Ariadne, and the fierce bull, is really based on truth! It makes the stories of the Iliad and Odyssey much more real and interesting, especially when the "Treasure Trail" includes the Greek black-and-red-figured vases, with their pictured-stories of Odysseus, Athene, Poseidon, Paris, Hector ,and all the story people who thus take on added significance and interest.

What fun to see the period rooms in the American Wing, which make the time of Miles Standish and that of George Washington take on meaning and reality; or the models of old New York in the Museum of the City of New York, which, again, urge another Treasure Trip to the lower tip of our Manhattan island where old Peter Stuyvesant surrendered to the English "for his people's sake," and New Amsterdam became New York. Joan of Arc lives again in picture and sculpture, as many boys and girls discover, when they find on Riverside Drive the statue of her on horseback, leading her army to victory, the relief of her as a young peasant girl in the Chapel of her name in the Cathedral of Saint John the Divine; the painting of her, in the Metropolitan Museum of Art, receiving the message in her father's garden that she, who knew nothing of soldiers or warfare, was chosen to lead her country to victory, her king to be crowned. And so we might go on with other areas in which audio-visual integrated programs stimulate the desire to see original material in proper settings. Then, words take on meaning, reality, life. Then, the real experience becomes the learning situation.

Thus we, at Hunter, feel that we are, to some degree, realizing the value of Audio-Visual Enrichment, especially in connection with the teachers-in-training who will "carry on" in other schools, and the gifted children in the Hunter Elementary School, who need this enrichment. It is not as a separate subject that

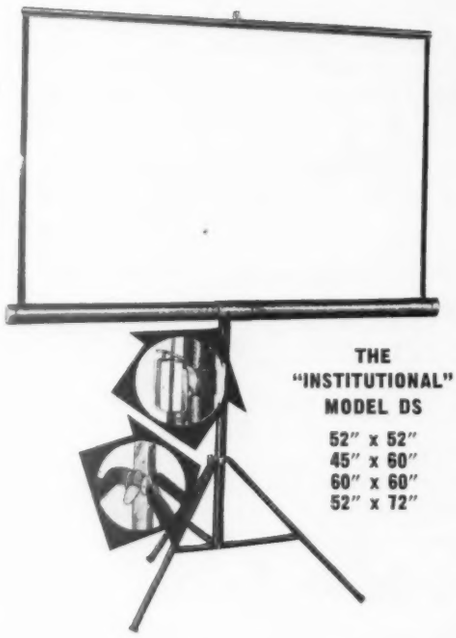
NEW - LARGER - PERFECTED!!

RADIANT

AUTOMATIC SCREEN

For every educational use. . . . Unsurpassed in portability, ease of operation, rigidity and perfect alignment.

● Once again Radiant meets a long-felt need! Our new "Institutional" Model DS has every exclusive feature of our famous Model D Automatic . . . and ***improves on it!*** Now you can have all the Automatic portability and ease of operation in a screen large enough to meet your needs. The famous Radiant "Hy-Flect" glass-beaded screen — guaranteed for permanent whiteness. Square tubing on ***both*** tripod and extension support provides maximum rigidity on even the largest screens. A solid square extension rod ***insures*** proper alignment. Positive locking in ***any*** position at ***any*** height. No set screws or hand operated locking devices—AUTOMATIC! Write today for FREE descriptive folder.



THE "INSTITUTIONAL" MODEL DS

52" x 52"
45" x 60"
60" x 60"
52" x 72"

RADIANT **MANUFACTURING COMPANY** 1140-6 W. Superior St., Chicago, Ill.

it is valuable, but as an effective, vital, teaching method, integrating and vitalizing many areas of learning in the curriculum. Surely, these areas are thus given greater meaning and interest to the child, and each is related more meaningfully to the whole experience of learning.

Most important of all the results of this enrichment have been a more joyous attitude towards learning and the ability to experience more happily, and to express more creatively. Who can estimate its value to children with their eagerness to see, to hear, to touch—their willingness to learn, their capacity for wonder and discovery, their ability for free and joyous expression? This year, opportunity for greater enjoyment in learning will be extended to the two new pre-school groups of three-and-a-half and five-and-a-half-year-olds. They will be able at an earlier age, to benefit from these richer experiences since their I.Q.'s range from 138 to 190.

A visitor to the Hunter College Elementary School would find the "heart" or "core" of this Enrichment in the colorful Library-Museum, a "cosy," "homelike" place, the children say. The Parents' Association of the School are so vitally interested in this work, and in making the Library a livable, inspiring room, that they have contributed a radio for each room; and for the Library—books for all age levels, seats for the smaller children, window drapes and plants, and, of especial interest, a unit of bookcases, "bin"[6] for large photographs, and cabinets.

In this room, at eight-twenty in the morning, college students and eighth grade pupils assigned to this activity, are busy. The "bin" is opened, and the color prints carefully removed for distribution to the different rooms according to the chart which was planned by one of the student-teachers, and which really "works"! Teachers and children have a chance to choose the large color-print (often a fine Medici print) they prefer. Each afternoon these are collected, checked on the chart, and put back in the bin. Those pictures chosen for the Library, where many children and college students may enjoy them, are displayed on cabinets and easels. This service has also been extended, as required, to the Educational Department of the College.

Next, the Visual Aid Room is opened by appointed children of a lower grade. They don their smocks, mount their stools, and are ready to put slide-sets carefully away upon strong shelves, distribute stereoscopes, show where the stereopticon lanterns are kept, or distribute literature about the kind, quality, and place of available Audio-Visual Aids.

How the children enjoy this enrichment! They tell stories about the beautiful color-pictures which visit them in their classrooms, make original pictures inspired by them; choose their favorites in the Library-Museum and freely express their reasons for such choices; do research for and following their Integrated Programs. Creative attitudes are stimulated in thought and action, which will bear direct influence upon human behavior, add greater happiness to everyday life, and wider understanding not only of their immediate environment, but of the many different peoples who make up the world in which they live.

[6]Designed from the Metropolitan Museum of Art's photograph cabinets.

TEACHER FILM EVALUATIONS

Now available on 150 Films!

In the form of Film Evaluation Supplements to "1000 and ONE" Film Directory. Produced under THE NATIONAL FILM EVALUATION PROJECT.

The first service of its kind. Meaningful, trustworthy evaluations of educational films — in card index format — as scored by experienced teachers *after actual use of the films with classes,* not by "reviewers," "discussion groups," or "committees" viewing the films apart from the classroom situation.

The First Three Supplements Are Ready

Each supplement consists of 50 FE (Film Evaluation) Cards, standard library size, carrying detailed evaluation on fifty films. Also included is a copy of the Standard Score Card (developed expressly for the Project) for reference in reading the FE Card.

The Film Evaluation Card

Each FE Card gives full data on a film: title, producer, number of reels, sound or silent, a detailed synopsis of the contents supplied by the ten University Extension Divisions cooperating on the Project, itemized letter scores on all questions contained in the standard score card, and final percentage scores (Average and Mean) for the film as a whole. Often are added analytical Score separations and additional comments by judges. Each FE Card bears a serial number—Supplement I, FE 1 to 50—Supplement II, FE 51 to 100—Supplement III, FE 101 to 150, etc.

Method of Evaluation

The Judging Committee of the National Film Evaluation Project consists of over 1,000 teachers in 36 states (volunteers for the Judging Committee always welcome). They score films as used. As the score cards come in, they go into an omnibus file that has a guide card for every film. When a film accumulates its quota on score cards it is ready for appearance in the next Supplement. The 150 film evaluations in the three Supplements so far issued were based on 15 to 50 Score Cards per film.

Unique Data in Unique Form

at the price of only 50c per Supplement of fifty cards each. **$1.50** will pay for the 150 Evaluations now ready. Postage prepaid when cash accompanies order.

EDUCATIONAL SCREEN

64 E. Lake Street **Chicago, Ill.**

Experimental Research in Audio-Visual Education

By DAVID GOODMAN
New York University, New York City.

Title of Thesis
MOTION PICTURES VERSUS LANTERN SLIDES IN TEACHING CERTAIN UNITS OF BIOLOGY

Thesis completed 1941 for the degree of Master of Arts, University of Texas, Austin, Texas.

Investigator: Miss Katherine Rose

Purpose of Study

To determine the comparative effectivness of lantern slides and moving pictures when used in teaching certain units of biology. An attempt was made to compare the achievement of Group I, which was taught with lantern slides, with that of Group II, which was taught with moving pictures, by means of such statistical measures as medians, quartile deviations, means, and standard deviations. A study was made of the relationship between the intelligence of subjects and their achievement in biology when motion pictures were used and when lantern slides were used. An effort was made to determine whether corresponding pairs of students in the two groups made similar gains.

Procedure

Each of the two experimental groups consisted of twenty-five students in biology enrolled in the Polytechnic High School, Forth Worth, Texas during the 1940-1941 session. These groups in turn were each divided into normal and inferior subgroups to permit the recording of additional statistical data. An intelligence test and an achievement test in biology served as a basis for grouping the students.

The subject matter employed in the experimental study was based on the structure and functions of the nervous system, the eye, and the ear. Three excellent biological films were employed in the Film Group, and three sets of photographic lantern slides made directly from these motion pictures were used in the Slide Group.

The final test over the units was administered to both the Film Group and the Slide Group at the beginning and at the end of the experimental procedure. Three comprehension tests, objective in nature and based on the content of the three films used in the experimentation, were given both groups immediately after showing the corresponding film to the Film Group and the corresponding set of slides to the Slide Group.

Conclusions

1. The general achievement of the Slide Group exceeded that of the Film Group, as revealed by the medians, means, and quartile deviations of the final test over the units and of the achievement test in biology.

2. The scores made by the Slide Group on the tests over the nervous system, the eye, and the ear exceeded those of the Film Group.

3. The greatest amount of progress on the final test made by sub-groups, classified according to intelligence scores, was made by the normal sub-group of the Slide Group and by the inferior sub-group of the Film Group. The difference in the percentages of gain, however, was found to be statistically reliable in only 55 cases in 100.

4. A statistically insignificant difference existed between the means for the two normal sub-groups on the test over the nervous system, whereas the mean score for the inferior sub-group of the Slide Group exceeded the mean score for the inferior sub-group of the Film Group.

5. Greater mean scores on the tests over the eye and the ear were recorded for both the normal and inferior sub-groups of the Film Group.

6. Except in six cases, members of corresponding pairs of students acting as subjects in this investigation did not make the same gains or the same scores when one was taught with slides and the other with films.

7. In recording the gains made by corresponding pairs of students on the various tests, it was found that greater gains

were made by members of the Slide Group in approximately three-fourths of the cases.

The results of the experimental investigation, condensed in the form of conclusions, seem to indicate that the lantern slide-lecture is more effective than the motion picture in teaching certain units of biology.

Title of Thesis: A FEASIBLE PROGRAM FOR VISUAL EDUCATION IN THE INTERMEDIATE GRADES.

Thesis completed 1940 for the degree of Master of Arts, University of Arizona, Tucson, Arizona.

Investigator: FAYE B. HUETSON

Problem of Study

To set up a working program for the use of motion pictures in the fourth, fifth, and sixth grade geography classes.

Procedure

A study was made of the various research investigations dealing with the use of motion pictures and of the work of educators who have established visual education departments. Definite criteria for the establishing of a program were set up as follows:

(1) Well-known principles in visual education should be the basis of the program;
(2) Proper financial support should be obtained if possible;
(3) Proper preparation of the teacher should be required;
(4) Good equipment should be a prime requisite.

The report includes a discussion of the types of films offered, of standards for the selection and evaluation of films, and of methods to be used in carrying out a film lesson. Many phases of teacher preparation and responsibility are set forth. A survey of equipment suitable for the work was made. How a well planned program may contribute to the general objectives of education and to the more specific objectives of geography is definitely shown.

Conclusions

1. The teacher should know how to secure, select, evaluate, organize, and present a film lesson, and how to inspire the pupil to continue study on the unit.

2. Through visual education there can be an improvement in geographic instruction and thus bring about a greater realization of the objectives of education.

Visual Education in the Air Corps

(*Concluded from page* 10)

missioned officers who are specialists in different phases of visual education, and approximately twenty-five civil service employees and soldiers. This Training-Film Preparation Unit has as its mission the writing of motion picture plans which will be made into scenarios and produced by the Signal Corps. In addition to this, the unit prepares the plans and pictorial material for film-strips. This material consists of final positive prints on standardized mounts, which are re-photographed by the Signal Corps on 35 millimeter strips as film slides.

Typical projects under way at Chanute Field at present are the film-strips "Aircraft Storage Batteries", "Aircraft Carburetion Principles" and "Principles of the Internal Combustion Engine." Picture plans for motion pictures are being prepared on "Parachutes", "Altitude Flying" and "Aircraft Sparkplugs." More than 150 films and film-strips are being planned for production for Chanute Field.

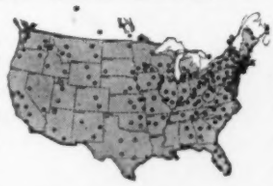
The techniques and methods familiar to the commercial and educational screen have thus been taken over by the Air Corps and utilized to the fullest extent in the production and screening of subjects which will help speed the national defense program. Educators, psychologists, photographers, writers and artists combine their specialties to help Uncle Sam train his soldiers better, quicker and more thoroughly than before the advent of visual education.

FOR THE ARMY, NAVY, AIR CORPS AND GOVERNMENT AGENCIES

U. S. Department of Commerce
Bureau of Fisheries
Bureau of Foreign & Domestic Commerce
U. S. Department of Interior
U. S. Office of Education
U. S. Treasury Department
Federal Security Agency
Civilian Conservation Corps
Social Security Board
U. S. Housing Authority
Works Progress Administration
U. S. Department of Agriculture
U. S. Department of Justice
U. S. Department of Labor
Children's Bureau
Women's Bureau
Division of Labor Standards
U. S. Public Health Service
U. S. Bureau of Mines
Federal Bureau of Investigation
U. S. Maritime Commission
Office of Emergency Management
All Recruiting Service Activity

THE VICTOR ORGANIZATION OF TRAINED MEN CARRIES THESE VITAL PICTURES TO EVERY CITY AND VILLAGE IN THE LAND—

Through their Schools, Churches and Industrial Plants — Civic Clubs — Welfare Agencies — Farm Groups — Adult and Alien Education Groups.



(Map shows location of Victor representatives—the largest force in the 16mm Sound Motion Picture Field. Result—Prompt Service.)

THE VICTOR ANIMATOPHONE IS ALREADY SERVING ALL THESE AGENCIES

Worldwide, Victor Animatophone gives these vital Government Films a finer picture clarity and sound superiority—and a multiple-use feature that permits service in either small or large auditoriums, for groups indoors or outdoors and with mike and turntable facilities.

ASK FOR NEW CATALOG

VICTOR
ANIMATOGRAPH CORPORATION
Dept. D-1 Davenport, Iowa
DISTRIBUTORS THROUGHOUT THE WORLD

SCHOOL MADE MOTION PICTURES

By HARDY R. FINCH
Head of the English Department
Greenwich High School, Greenwich, Conn.

With a question box on the making of school film productions, conducted by
GODFREY ELLIOTT, Oakvale, W. Va.
Readers are invited to submit questions.

HOW can a college explain its educational facilities to its alumni and the public? Campus-made films are helping many educational institutions to solve this problem today.

At Antioch College, Yellow Springs, Ohio, students are enrolled under the co-operative plan; that is, they alternate between college and industry in five or ten-week shifts. Two Antioch students are assigned to one job. While one is at school, the other is at work in Dayton, Chicago, or some other city. Then at the end of a five- or ten-week period the position of the two students is reversed, the one at school going to work, the one at work going to school. This arrangement is continued throughout the year.

George C. Klein, who filmed "Co-ops at Work."

To show the co-operative plan in operation was the problem of George C. Klein, Antioch student. Armed with a 16mm. camera, Klein spent eight weeks making a documentary film. During that period he traveled over 6,000 miles and visited sixty-one employers of Antioch students. Arrangements were made with employers in advance, and many of them co-operated by giving suggestions, furnishing equipment, and appearing in the picture. The Personnel Department of the College planned the general organization of the film, but on location, Klein was his own cameraman, director, and technician. Cities visited included Chicago, Cleveland, Detroit, Rochester, New York City, Framingham, Mass., Dayton, Ohio, and Greensburg, Pa.

Approximately 4000 feet of kodachrome were used. After editing, 1200 feet were selected for the final release. A recorded commentary with musical background has been made. A description of the film, as furnished by Mr. J. D. Dawson of the college Personnel Department, follows:

Part I Introduction—Some campus scenes, college classrooms, statute of Horace Mann (founder of college), quick shots of various jobs and of skylines of different parts of the country as well as of different modes of transportation. One student is followed from an interview with a member of the Personnel Department—in which various jobs are discussed—to packing up to leave campus, taking a bus, getting off in a strange city, getting a room, and reporting for work.

Part II Business—Includes shots of several types of department store jobs, office and secretarial jobs, a job in a consumers' co-operative, accounting, commercial art, and newspaper jobs.

Part III The Social Sciences—Shots of a variety of jobs to show spread of job activity; then jobs in child development, social welfare, dietetics, and education and public administration.

Part III Science and Engineering, and Finale—Quick flashes of industrial plants and laboratories followed by pictures of jobs in chemistry, engineering, pre-medicine, and research—metallurgical, bio-chemical, and physics. Finale is a recapitulation of the whole co-operative program picturing the different fields of endeavor in which Antiochians are engaged.

The film is available for showing before educational groups. All inquiries regarding it should be addressed to Director, Personnel Department, Antioch College, Yellow Springs, Ohio.

Texas

The Central Visual Education Laboratory of the Houston Public Schools has completed a 1400 ft. 16mm film in Kodachrome dealing with secondary education in this system. Mr. J. O. Webb, Assistant Superintendent in charge of the Senior Schools, wanted to show a cross section of the normal activities of the Senior High Schools at the State Teachers Convention held in Houston November 20-22. Accordingly, the film was produced showing typical classroom and extra-curricular situations in each subject field. Sound accompaniment was achieved by using two turn tables for continuous background music and a microphone for the spoken narration. Paul F. McRoy was the director of the film.

Question Box on School Film Production

5. **What lenses would you recommend that the school buy for its 16mm camera?**

The typical single-lens camera will be equipped with the standard one-inch lens, which is the size that will see the greatest use in ordinary production. If this is a fixed-focus lens, as is most often found on inexpensive cameras, the first lens purchase should be a one-inch in a focusing mount. If additional lenses are to be bought, the next lens (in order of usefulness) should be a wide-angle (15mm) lens. This latter lens is extremely desirable in filming interior scenes where groups are involved. Many amateurs favor the 15mm lens for certain close-up work because it gives better perspective and greater depth of field. A telephoto lens should be purchased only after the other two lenses are acquired. A three-inch or four-inch telephoto is useful for many types of outdoor shooting, such as football, parades, band maneuvers, etc.

2. **How can we have the camera precede a character who is walking down the school corridor?**

No doubt you have reference to the "dolly" shot, which Hollywood accomplishes with the aid of rubber-tired buggies and elaborate mechanical cranes. The amateur can achieve a simplified version of the dolly shot by seating the cameraman in a child's rubber-tired wagon and having a helper pull him slowly and steadily down the hallway in front of your characters. It is not difficult to improvise a shot such as this if pains are taken to use a mount that is steady. Great care must be used to see that the lens is maintained in proper focus. For a good illustrated article on camera dolly shots for the amateur, see the December issue of *Movie Makers*, pages 548-549.

3. **We encounter considerable confusion surrounding the terms "synopsis", "continuity", "scenario", and "script". Can you help straighten these out for our production committee?**

The nomenclature of amateur production is not clearly established. Many of the terms are hold-overs from the Hollywood silent days, and many are adaptations of present-day terms. Different writers use the terms in different senses. Many writers use "synopsis" and "continuity" synonymously, while others separate the two terms with different meanings. "Scenario" and "script" are synonymous for all practical purposes, though some confusion results from their being used interchangeably.

"Synopsis" refers to the outline of the story idea. It is the skeleton around which the fuller development of the story will be written. The English teacher would call it the paragraph outline of the theme that is to be written.

After the story idea has been outlined as a synopsis, it is devoloped more fully as a straight piece of action prose. This is the final narrative form of the story. This is the "continuity."

The continuity, in turn, must be rewritten in terms of camera angles and other mechanical details, clearly blueprinting the action for the benefit of the cameraman. This is the point where each action paragraph (sequence) of the continuity is broken down into clearly defined camera scenes. When this has been done you will have the "script" or "scenario." Any attempt to define the two terms as distinctly separate steps in school production will only serve to confuse the production committee.

4. **Can you expect the war to cut off our supply of film?**

The government and manufacturers say that it will not. At least that is what they were announcing just prior to the actual declaration of war last month. At present there is reason to believe that this statement still stands, and that drastic curtailment of film stock is not yet in sight.

However, priority orders on aluminum have completely stopped the production of lighting equipment, reels and humidor cans, camera and projector housings, and all other photographic articles made of aluminum. Substitutes are making their appearance rapidly. Plastics and zinc are permitting limited production of camera and projector bodies. One manufacturer of lighting reflector units has announced an enamelware reflector, even claiming that it is superior to aluminum units in certain respects. Plastic film reels are announced for the 8mm field, and doubtless will soon be tried for 16mm. Photographic lenses are becoming scarcer every day.

Most Unusual Subject!

The CLOTH of KINGS

Read this review that appeared in Educational Screen when it was first shown in America's best theatres.

'THE CLOTH OF KINGS' is an informative and effective travelogue showing the weaving of Irish linen. It received the Merit Award from Associated Publications for the outstanding short subject of the week. We quote a review of it from the 'Film Daily': 'During the process, the peasants gather and prepare the flax in their primitive way, for the weaving machines. But in the factory ancient methods give way to the new and the fibers are processed by modern technique. True Irish colleens are among the factory workers, and their deft fingers create the designs and trace the delicate embroidery that completes the job. During the early scenes the cameraman captures some picturesque views of the Irish countryside which recall painted landscapes. The subject has an absorbing interest throughout, its incidental educational value detracting not at all from its entertainment qualities.' "

Whether you seek
EDUCATION or ENTERTAINMENT
you will find that
the VISUAL way is the BEST way!

Write Immediately to

Universal's Non-Theatrical Department for full information about this outstanding film, as well as the most complete catalog of short-subject comedies, musicals, travelogues and animated cartoons ever assembled!

WRITE FOR FREE CATALOGUE NO. 17

UNIVERSAL PICTURES COMPANY, INC.

Rockefeller Center New York, N. Y.
CIRcle 7-7100

KODACHROME
Originals Copies
Duplicates
made from your own material
in
Single-Frame Slidefilms
Double-Frame Slidefilms
2" x 2" Glass Slides and also
3-1/4" x 4" Standard Size Glass Slides
Write for Full Information
COLORCRAFT STUDIOS
6 N. Michigan Ave. Chicago, Illinois or Portland Oregon

COLOR CARTOONS
Rental $2—16mm SOUND. Series of 9, including
JACK FROST ALADDIN'S LAMP MARY'S LITTLE LAMB
PIN CUSHION MAN LITTLE BOY BLUE and BO PEEP
Also many other short subjects. Send for free information. Do you know we have Features as low as $5?
MANSE FILM LIBRARY 1521 DANA AVE. CINCINNATI, O.

SLIDES General Science.....11 rolls
35 mm. Principles of Physics..... 7 rolls
FILM Principles of Chemistry..... 8 rolls
Fundamentals of Biology..... 8 rolls
Write for Folder and Free Sample Strip
VISUAL SCIENCES, Box 264E **Suffern, New York**

SPECIALS FOR FEBRUARY
"ABRAHAM LINCOLN"—10 reels
Talkie feature with Walter Huston
"HIGHLIGHTS OF LINCOLN'S CAREER"—1 reel
"LITTLE MISS MOLLIE"—7 reels
Irish musical comedy with a child star
"LAST DAYS OF POMPEII"—6 reels
Historical feature
All talkies
Reserve your February dates now.
VISUAL ART FILMS DISTRIBUTORS
1303 Porterfield St. Pittsburgh Pa.

"KNOW YOUR BIRDS"
NEW –16mm Color Film of Wild Bird Life
SERIES NO. 1 . . . ROBIN, BLUEBIRD, WOOD-THRUSH
SERIES NO. 2 . . . TITMOUSE, CHICKADEE, NUTHATCH
Ideal for your visual education program. Clear, large titles. Masterful new technique. Mr. Geo. B. Thorp, Audubon Society, says, "High level of photographic artistry makes these pictures a pure delight."
Write for descriptive folder and special school price.
HEIDENKAMP NATURE PICTURES 538 Glen Arden Drive PITTSBURGH, PENNA.

Filmusicals for Music Classes
Piano, cello, violin and vocal soloists in a brilliant film concert.
Write for Free Literature
LEWIS *Film* SERVICE
216 E. First St. — Wichita, Kansas

RADIO-MAT
TALK from your screen WITH your quickly TYPEWRITTEN MESSAGES
50 RADIO-MATS $1.50
White, Amber or Green.
Accept no substitute.
IS THE STATIONERY OF THE SCREEN
MAKE YOUR OWN
TYPEWRITER SLIDES
For Screen Projection
USE RADIO MATS
on sale by Theatre Supply Dealers
Write for Free Sample
RADIO-MAT SLIDE CO., Inc.
1819 Broadway, Dept. V, New York City

News and

Fifth School Broadcast Conference

For the fifth consecutive year the School Broadcast Conference was held in Chicago on December 3, 4, and 5, at the Congress Hotel. This Conference provides an annual meeting place for educators, broadcasters and directors of radio in education who are responsible for the development of educational radio programs, and all those interested in the utilization of such programs.

The three-day meeting was opened Wednesday morning by chairman Major Harold W. Kent, formerly director of the Chicago Radio Council and now with the Radio Branch of the U. S. War Department. George F. Cassell, Assistant Superintendent of Chicago Schools, delivered the address of welcome, which was followed by a symposium on "How We Use Radio," presenting nine different utilization procedures, from the experience of the classroom teacher, in various studies of the curriculum. The early part of that afternoon was devoted to a demonstration of "The Value of the Radio Workshop" by student-members of the Chicago Central Radio Workshop, an all-city high school activity. Presiding over these two General Sessions were respectively James R. Angell of NBC and John Watson, Texas Technological College, Lubbock.

Among the sessions which attracted keen interest, as evidenced by the attendance, were the classroom demonstrations showing the utilization techniques of various types of radio programs. Of particular note was one which correlated the radio lesson with a film, presented Thursday afternoon by Frances Stange, teacher in Longfellow School, Oak Park, Illinois, and her seventh grade students. The Erpi film on "Argentina" was projected preceding the broadcast on "The Story of San Martin," one of the regular Thursday programs of the School of the Air series on "Tales from Far and Near." Class discussion of the broadcast followed. Lack of time prevented complete development of the unit. The film received only brief discussion after its showing but was referred to again after the broadcast. It was used mainly to stimulate interest in the historical background of Argentina, birthplace of San Martin, the South American liberator.

Among the concurrent meetings and demonstrations held during the Conference was an "Experiment in Audio Visual Teaching," conducted by Miss Regina Somers, teacher, and class of 6th grade pupils from the Cameron School in Chicago, in coopeartion with the Society for Visual Education, Chicago. In this demonstration 2 x 2 Kodachrome slides were used as illustrative material correlating with classroom reception of an educational broadcast on "Christmas Reds and Greens," from the weekly series "The Science Story Teller."

Other demonstrations in which Chicago school children participated were: "The Greedy Goat," a transcribed program from the Minnesota School of the Air Primary Series; "Mexican Folk Art," one of the weekly productions of the Art Department of the Chi-

Notes

cago Schools, and "The Constitution of the United States," a transcription from the popular "Cavalcade of America" series. Audience discussion was invited at the end of each session.

Work Study Groups assembled every afternoon to consider different aspects of radio in the school, such as: The In-High School Workshop, Use of the Transcribed Program, School Use of News Programs, Radio and the Administrator, Radio and Printed Material, Art and Radio, Foreign Languages, The Simulated Broadcast, Junior Colleges and Radio, Teacher Training in Radio, Evaluation of School Broadcasts, School Radio Chairman, Sight Saving-Talking Books.

Speakers on the program included Edward M. Kirby, Chief, Radio Branch, U. S. War Department; General Frederick Osborn, U. S. Army Morale Division; William H. Johnson, Superintendent Chicago Public Schools; W. W. Charters, Ohio State University; Gordon Studebaker, Radio Script Exchange, Washington; John W. Gunstream, Director Texas School of the Air; William D. Boutwell, U. S. Office of Education; I. Keith Tyler, Ohio State University.

The work of the Pan-American Council of the School of the Air, organized last April, was summarized by Sterling Fisher, Educational Director for CBS. The purpose of the Council is to plan programs and to aid in the exchange of educational materials in the preparation and use of the programs of the School of the Air, which is now extended to Havana, Mexico, Canada, and South America.

Awards and citations in the Second Utilization Competition were given at the closing banquet session Friday night.

Proceedings of the Broadcast Conference will be available soon. Price will be $2.00 in mimeograph form, or $3.00 printed and bound in cloth.

Museum "Rediscovering America" Program

"Rediscovering America," a good-neighbor film survey of all the Americas, the first motion-picture program of its kind ever to be organized, had its premiére at the Philadelphia Museum of Art, the Parkway at 26th Street, on Saturday, November 29th. Units of this twenty-seven week free film program, approximately one hour in length, are being shown on Saturdays and Sundays at 2:00 and 3:30 p. m. through May 31, 1942.

Designed to make Americans more familiar with their country and their Latin American neighbors, the "Rediscovering America" film program is the Art Museum's contribution to the broadening of our cultural horizons through a better understanding of the world we live in, and a means of meeting today's challenge to our way of life.

This new series of important feature films, carefully selected by the Art Museum's Division of Education in collaboration with the American Film Center of New York City, provides a comprehensive and memorable portrait of our nation and our hemisphere. The program subjects, each dealing with a major phase of life in the Americas and each composed of one or more

The Draper X-L unit shown above provides for windows of unlimited width.

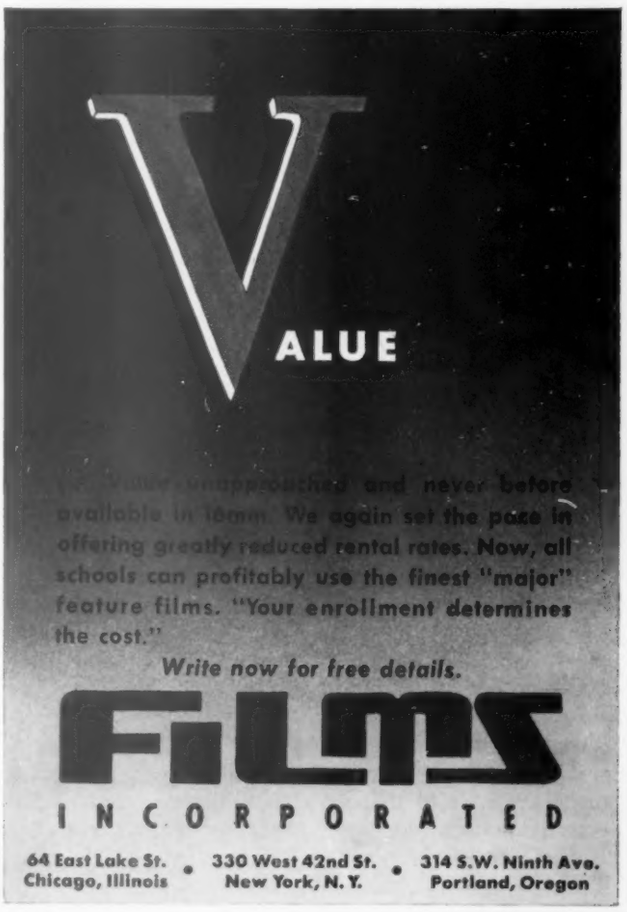
THERE IS A DRAPER DARKENING SHADE FOR EACH TYPE WINDOW

DRAPER Darkening Shades are the simplest and most economical. Dratex cloth hangs flat to the casing or wall surface and does not leave streaks when hung to overlap sufficiently. Notice the ample overlap of cloth in the two close-up views of the X-L Unit at the left.

Special construction for BLACKOUTS offered in both roller and folding styles, with or without shields as may be necessary for satisfactory results.

Write for free literature showing classroom lighting and darkening for all types of windows, including skylights.

LUTHER O. DRAPER SHADE CO.
Dept. ED1 Spiceland, Ind.


VALUE
available in 16mm. We again set the pace in
offering greatly reduced rental rates. Now, all
schools can profitably use the finest "major"
feature films. "Your enrollment determines
the cost."
Write now for free details.
FILMS
INCORPORATED
64 East Lake St. Chicago, Illinois
330 West 42nd St. New York, N. Y.
314 S.W. Ninth Ave. Portland, Oregon

CLEAR AS CRYSTAL
in both sound and picture
HOLMES 16mm Sound-on-Film PROJECTORS
The Holmes portable machine has always stood out for the vividness and distance of its film projection, the clarity of its sound reproduction . . . its smooth, silent and faultless operation.
Illustrated is an all ball-bearing 10-tooth sprocket projector with amplifier attached. Runs either sound or silent pictures with equal facility.
Write for demonstration and catalog.
A Machine for Every Need
16mm Portable, Mazda or Arc Lamp.
35mm Portable, Mazda or Arc Lamp.
35mm Imperial for Auditoriums.
Holmes PROJECTOR COMPANY
1813 Orchard Street CHICAGO

program units, follow a logical sequence: The Democratic Way of Life, The American Scene, Public Welfare, Public Works, Conservation of Natural Resources, Industrial America, National Defense, U. S. Possessions and Outposts, Canada, Mexico, Central America, South America, Americans All.

Outstanding among the motion pictures to be shown are many new government films, such as *Harvests For Tomorrow,* a documentary masterpiece about the character and culture of New England with commentary by Frank Craven; *Women In Defense,* with commentary by Eleanor Roosevelt and narration by Katherine Hepburn; *Power And The Land,* the simple saga of electric power in the service of man; *A Place To Live,* the Philadelphia story of housing; *Hydo,* story of the harnessing of America's greatest power stream, the Columbia River; and *Bomber,* with commentary and narration by Carl Sandburg.

Other new and recent films of distinction showing at the Art Museum include: a unique series of color films on Mexico, Central and South America prepared by the U. S. Office of the Coordinator of Inter-American Affiairs; two programs of Canadian films made by John Grierson; several important films on the democratic process, such as *March Of Freedom, Design For Education* and *The Last Stronghold;* and other significant films relating to America's past and present.

The "Rediscovering America" film program is being made available to schools, clubs, museums and similar organizations through the American Film Center, 45 Rockefeller Plaza, New York City.

Film Material on South America

The Coordinator of Inter-American Affairs wishes to make it known to all non-theatrical users of motion pictures that the first of a series of films devoted to South America and its culture, is now available for free distribution.

Americans All, a two-reel documentary film produced and narrated by Julien Bryan, is the first to be so released for the use and benefit of North American audiences. It is planned and intended that the wide circulation of this and other films to follow, will provide the friendly tie between neighboring Republics and help us to know and understand the other Americas.

Prints will be available through the nation-wide services of the Museum of Modern Art, the Y.M.C.A. Motion Picture Bureau and other distributors to be selected. The Coordinator asks but one essential in providing these free films and that is a full report from all users as to the character of audiences and their reception of films.

For more complete information, address the Coordinator's office at the Museum of Modern Art, 11 W. 53rd Street, New York City.

Association for Education by Radio

Charter memberships are now open in a new professional organization to serve that expanding group of educators, broadcasters, and others interested in school use of radio. The organization, christened the Association for Education by Radio, was formed in May 1941 at a meeting called by Harold W. Kent of the Chicago Radio Council. Its primary objectives are the development of an instrumentality through which persons interested in education by radio may have adequate communication, and the cooperation with institutions and groups active in education by radio.

The first annual meeting of the Association will be held February 23, 1942, at the Francis Drake Hotel, San Francisco, in conjunction with the meeting of the American Association of School Administrators.

Those interested in more information about the new organization should write to the Association's headquarters at 228 N. LaSalle St., Chicago.

Visual Program on Defense Theme

The New York Society for the Experimental Study of Education held a Visual Instruction section meeting on the evening of December 12 at New York University, with Mrs. Esther L. Berg, Assistant Principal, Public School 159, presiding as chairman. The theme of the meeting was "Visual Aids in the Defense Program." Dr. C. Frederick Pertsch, Assistant Superintendent and Administrator of Civilian Defense in the Schools, gave a comprehensive talk on how to meet aerial attack, as far as schools were concerned.

Motion pictures and other visual aids were shown to demonstrate measures for defense. The showings included films produced by the United States Office of Education, the Canadian Government, British Library of Information, the Coordinator of Inter-American affairs, and a filmstrip series on "Mechanics" produced by Jam Handy Co. Keystone stereographs for use in Tests of Visual Efficiency were displayed. Audience

HAL ROACH 16mm SOUND FILMS

AVAILABLE FOR *FIRST TIME!*

THERE GOES MY HEART (Available Now)

Fredric March, Virginia Bruce. Exciting newspaper story. A clever young reporter seeks a missing heiress. Colorful backgrounds!

TOPPER TAKES A TRIP (Available February 1, 1942)

Constance Bennett, Roland Young. Unusual camera tricks! Hats lift themselves! Cars drive by themselves! No wonder Topper can't make it out!

ZENOBIA (An Elephant Never Forgets) (Available May 1, 1942)

Oliver Hardy, Harry Langdon, Billie Burke, Alice Brady, Hall Johnson Choir. A star-studded cast in a bright, original picture! Hear Zeke recite the introduction to the Declaration of Independence.

CAPTAIN FURY (Available June 1, 1942)

Brian Aherne, Victor McLaglen. Australia's Robin Hood rides again . . . fighting for freedom. Action! Adventure! As timely as today!

Welcome news for schools! You may now show four outstanding Hollywood sound films . . . produced by that indisputable master of comedy—HAL ROACH. Entertaining as well as illuminating! Order from your film library today!

Post Pictures Corp. Is the EXCLUSIVE DISTRIBUTOR of these Lighter - Brighter - Side of Life HAL ROACH Features.

Contractual agreements require the maintenance of a minimum daily rental of $17.50. An allowance of $2.50 is permitted on group or contract bookings. Offering these pictures at lower prices may lead to cancellation of exhibition without notice.

POST PICTURES CORP.

723 SEVENTH AVE. Dept. 10 NEW YORK, N. Y.

discussion, led by Miss Rita Hochheimer, Assistant Director of Visual Instruction, concluded this timely session.

University Inaugurates Visual Department

A Department of Visual Education of the Allan Hancock Foundation has been established at the University of Southern California, Los Angeles, with Warren Scott as chairman. It is an organization devoted to co-ordinating the use of films on the University Campus and the distributing of exceptional films throughout selected areas of the United States.

The first two series of the films for distribution are now ready. They include twelve productions of the Hancock Foundation for Scientific Research and eight initial offerings, of *The Music of the Masters* series, produced by Artists' Films, Inc. From time to time other films will be added to the materials available through the organization.

The Department of Visual Education is also endeavoring to co-ordinate information about films which are available within the United States. This means maintaining an extensive card catalogue, so that films on all subjects can be found quickly and information about them may be readily supplied.

Draftees Learn from Nazi War Films

Hitler's prized "terror films" depicting the invasion of neutral countries may become merely classroom blueprints for American soldiers as army officials study plans to show the pictures in draftee camps throughout the country. Speaking at the third session of the Westinghouse Photographic Lighting Conference, Bloomfield, N. J., Col. M. E. Gillette, Commanding Officer, U. S. Signal Corps at Fort Monmouth, N. J., told 200 amateur photographers that for the first time in history photographs, slides and motion pictures will play a major part in the training of soldiers. Movies showing panzers, dive bombers and tanks in action, intended as fear propaganda, actually can give selectees and enlisted men a first hand opportunity to analyze and discuss with their instructors Nazi operations in the field.

Films covering 200 subjects from personal hygiene to loading a rifle will be produced for the army curriculum this year. Hollywood will produce a few of these reels but most of them will be army-made under the direction of Washington officials.

Kentucky Audio-Visual Clinic

An "Audio-Visual Aids Clinic" was conducted by the Eastern Kentucky State Teachers College in Richmond, Janaury 10. Dr. F. L. Lemler of the University of Michigan was guest speaker, taking as his topic, "What Is Good Film Utilization?" Dr. D. W. Rumbold presented "Mechanics and Problems in Operating a Co-operative Film Library."

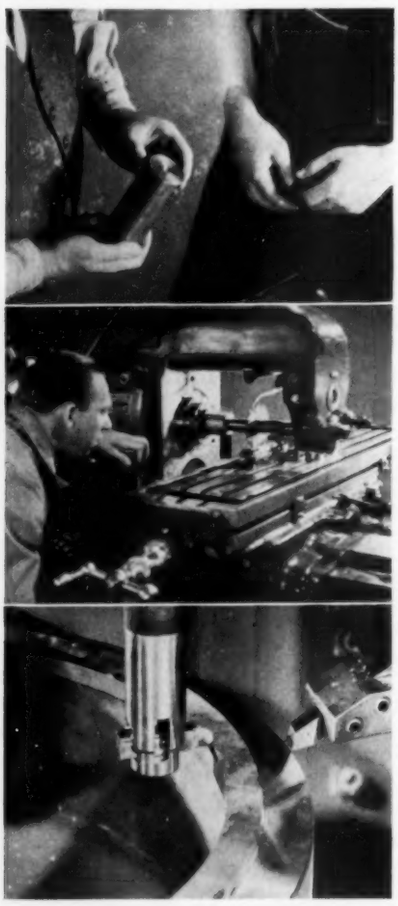
Eastern Kentucky State Teachers College serves as a repository of the films owned by the thirty school systems composing the cooperative group. This institution has made educational films an integral part of its courses since 1930, and last year appointed a full-time director of audio-visual aids.

Current Film News

■ CASTLE FILMS, INC., 30 Rockefeller Plaza, New York City, is now distributing eighteen of the series of 16mm sound films produced by the U. S. Office of Education for the training of defense workers. A library of fifty subjects has been planned to cover intensively all phases of machine shop practice in precision metal working. The eighteen ready are:

Engine Lathe—5 subjects.
Milling Machine—5 subjects.
Vertical Boring Mill—3 subjects.
Precision Measurement—5 subjects: *The Steel Rule; The Micrometer; Fixed Gages; Vernier Scale; Height Gages and Standard Indicators.*

State committees made up of representatives of industry, vocational training and labor coordinated the material to be used in the film scripts. The films are designed to show actual demonstrations of specific jobs on specific machines by expert operators; to emphasize such points as safety, the importance of blueprints, the need for cleanliness; to explain the basic principles of correct machine operations; and to assist instructors in overcoming some of the instructional difficulties of the subjects covered.



Shots from U. S. Defense Films:
"Engine Lathe" (top)
"Milling Machine" (middle)
"Vertical Boring" (bottom)

Right on the heels of America's formal entrance into war comes the announcement from Castle Films of a special news release under the title:

Japs Bomb U.S.A.!—8mm silent, 16mm sound and silent. Subject only to military regulation, this film will cover today's world-shattering occurences near both shores of the Pacific, on the broad expanse of the ocean itself, and on the important islands that dot its surface.

This new movie brings the number of Castle war films to sixteen, comprising an invaluable motion picture chronicle from the very inception of hostilities five years ago when Japan first invaded China down through each tragic chapter of the dark years that followed.

■ WALTER O. GUTLOHN, INC., 25 W. 45th St., New York City, announces several new film releases this month, including the following eight additions to their series of *History in the Making* shorts, with Tex McCrary commentator:

Our War—Round I—the fight against Japan; probable lines of strategy in the Pacific; roles for each of the Allies.

Our First Line of Defense—America's defenses in the air; work of the air force and civilians; protection of factories and homes against aerial attack.

Front Line Women—how British women work for the Army, Navy and air force; how American women are following in their footsteps.

Bernard Baruch—war on the economic front; industrial mobilization.

Production Soldiers—labor's role in defense; what labor leaders are doing in the present crisis.

Front Line Children—what is being done to protect them.

The New Disorder—Nazi rise to power and the reactions now taking place in conquered lands.

All God's Chillun Need Wings!—story of the Air Cadet League of Canada, composed of boys 12 to 18, who learn everything about flying but never touch the controls of a real plane.

Two new travel pictures in 16mm silent color are ready. They are:

Greece—contrasting ancient Greek architecture with modern Greece.

Yugoslavia—presenting native customs and folk dances, and scenes in Belgrade.

Two recent Bobby Breen features in 16mm sound are also announced by Gutlohn:

Escape to Paradise—a romantic and exciting adventure story with tuneful melodies, set against Latin American background.

Way Down South—Louisiana in the pre-Civil War days. Courageous little hero successfully fights to keep a vast plantation inherited from his father. Features spirituals by Bobby supported by Hall-Johnson Choir.

Walter O. Gutlohn, Inc. moved on December 12, 1941, to larger quarters at 25 West 45th Street, New York.

■ BELL & HOWELL COMPANY, 1801 Larchmont Ave., Chicago, has introduced a novel application of the quiz techinque, so popular on radio programs. Some seventy-odd films are being fitted with quiz-sheets containing from ten to thirty questions designed to test the powers of observation and retention, as well as the general knowledge level of the group viewing the film. Prior to the running of the film the questions are answered

Scene from "A Journey by Train," Bell and Howell release.

by each participant, the replies being revised where desired after the picture has been shown. The answers are compared with a master-sheet, and are scored. A "quiz-kit" consists of thirty question blanks, an answer key, and a folder giving rules for scoring. An additional charge of 25 cents is made for each kit.

War Without Warning is the general title under which Bell & Howell are offering forty to sixty-minute assembly programs composed of newsreel and other documentary film material, combined into logical composites by eliminating titles and recutting. Three chapters are now available: I War in the Atlantic. II War in the Pacific. III The Home Front.

Journey by Train—4 reels, 16mm silent, produced by Text Film Corp.—has been taken over by Bell & Howell for exclusive distribution. It shows all the details of a conventional railway journey as seen through the eyes of two young children—even to how the baggage-man takes care of pets that cannot be taken into passenger cars.

Pilgrim Fathers—2 reels, sound—is available for rental and sale. It deals with conditions in England leading to the sailing of the Pilgrims in the "Mayflower," and of their relations with one another and with their new neighbors in the new world. It was produced in England by the Mayflower Society of Plymouth.

Approximately 3000 films are listed in the 1942 Bell & Howell Filmosound catalog, published in four sections. This year the educational section takes up 72 pages, the "Utilization Digest" and index 24, the recreational catalog

(*Concluded on page* 40)

The World-Wide Fight for FREEDOM

IN 16MM SOUND FILMS

"Lights Out in Europe"

World-wide acclaimed screen story of the Nazi attack on Europe and Britain. Brings home the truth, honestly, without hysteria. Dramatically portrays the British Civilian Defense and preparation for total war. Critics, educators, commentators have termed it the best picture of the war crisis. 7 reels.

"The 400,000,000"

Absorbing and timely screen story of China's epic defense against Japanese invasion. Tells the story of China's culture, modern achievements, famous leaders, and above all the great national unified effort to save itself from invasion. A notable contribution to understanding of the situation inside China and its stirring fight for freedom. 6 reels.

"Crisis"

Stirring screen drama produced on the spot by eye-witnesses in defiance of Nazi censorship, this memorable portrayal of the brave stand of the last democracy in Central Europe before the Nazi invasion is living history. H. V. Kaltenborn says: "Beyond doubt one of the most important historical films of our time. Every American who believes in Democracy should see this film." 8 reels.

"After Mein Kampf--!"

How the Nazis climbed to power; the Reichstag Fire; the trial of Van der Lubbe; the Roehm Purge; persecution of religious and racial groups; annexation of Austria; Nazi fifth columnists; plans for aggression and conquest. A daring expose of Hitler and his program of conquest, powerfully and truthfully told. 7 reels.

HISTORY IN THE MAKING

A Series of Short Documentary Films
5 minutes each — Rental: $1.00 each

(or one free as "additional short" with feature)

AMERICA'S FACTORY FRONT
Necessity of concerted effort . . .
AMERICA'S NEW NOBILITY
Building a giant airforce . . .
BATTLE OF THE ATLANTIC . . .
The need for convoys . . .
BATTLE OF THE MEDITERRANEAN
War in the Near East . . .
BUNDLES FOR BERLIN
The R.A.F. in action . . .
"GUNG HO!"
China's appeal for aid . . .
HITLER'S SECRET WEAPON
Nazi propaganda work . . .
MASTER OF TIMING
The Hitler technique . . .
MIGHTIER THAN WORDS
Role of radio and personalities . . .
NIGHT HAWKS
England vs. enemy night bombers . . .
OUR EMPIRE IS THE AIR
Our contribution to modern aviation . . .
PROPHET WITHOUT HONOR
Gen. Mitchell, air pioneer, vindicated . .
THE PUNCTURED YELLOW PERIL
Stopping Japan in the East . . .
SEA POWER VS. AIR POWER
The lesson for U. S. A. . . .
SECRET OF THE BLITZ
Coordination for mechanized war . . .
THE SLUGGERS
Importance of tanks and anti-war defense
SWASTIKA OVER SOUTH AMERICA
Problems of our good neighbor policy
THAT TATTERED LACKEY
Mussolini's rise and present position . . .

"Stimulating, brilliantly selective and truly international in scope . . . best picture of war crisis to reach our screen."
—N. Y. Times
LIGHTS OUT in EUROPE
★★★½★ "A film that should not be missed"
—Daily News —World Telegram
WRITTEN BY JAMES HILTON
NARRATED BY FREDERIC MARCH

Feature Rental Rates on Request

Address Nearest Exchange:

BERTRAM WILLOUGHBY'S COAST-TO-COAST SERVICE

28 East 8th Street
Chicago, Illinois

2402 West Seventh Street
Los Angeles, California

1600 Broadway
New York, New York

18 South Third Street
Memphis, Tennessee

2615 Regent Street
Berkeley, California

613 Montana
El Paso, Texas

7 Coors Building
Littleton, Colorado

89 Cone Street, N. W.
Atlanta, Georgia

404 Film Bldg.
2108 Payne Ave.
Cleveland, Ohio

PROTECT FILMS AGAINST CLIMATE SCRATCHES. STAINS. FINGERMARKS-THE WAY THE U. S. GOVERNMENT AND THE HOLLYWOOD PRODUCERS DO
MOVIES STILLS
VAPORATE
PEERLESS FILM TREATMENT
ASK YOUR DEALER OR PHOTOFINISHER
VAPORATE CO. INC. 130 W. 46TH ST NEW YORK CITY
BELL & HOWELL CO. 1801 LARCHMONT. CHICAGO 716 NO. LABREA HOLLYWOOD

(*Concluded from page* 38)

80, and the religious catalog 36. The first two have just appeared, to be followed soon by the other two. To meet the demands of film patrons, the recreational catalog will include a listing of 75 rental subjects in 8mm, in both black-and-white and color. A special list of 77 color films in 16mm is offered in Bulletin No. 133. All catalogs are available without charge.

■ IDEAL PICTURES CORPORATION, 28 E. Eighth St., Chicago, have added several 16mm sound films on significant events in contemporary history to their rental library of national defense films, such as:

Crisis—8 reels—drama produced in Germany, showing the brave stand of Czechoslovakia, the last democracy in central Europe, before the Nazi invasion.

Lights Out in Europe—7 reels—a study of how war came to the common man; Nazi attack on Europe and Britain.

The 400 Million—6 reels—the story of China's culture, modern achievements, and the national unified effort to save itself from invasion by Japan.

After Mein Kampf?—7 reels—an expose of Hitler's program of terror and conquest.

History in the Making—a series of 18 short documentary films, 5 minutes each—digests of world events, personalities and conditions.

■ ERPI CLASSROOM FILMS, INC., 1841 Broadway, New York City announce the production of several new 16mm. instructional sound films on health and first aid.

The Eyes and Their Care—treats in detail the physiology and hygiene of the eye. Animated drawings clarify structure and function. The film explains learning to judge distance, eye movements, light receptors, field of vision, night blindness, double vision, near and far-sightedness, infections, and protection of the eyes.

Defending the City's Health—describes factors which affect the health of cities. The work of a model city health department is portrayed, and the role of the individual citizen in a health program stressed.

Posture and Exercise—explains muscle activity and the physiology of exercise. Concepts presented include the relation of the nervous system to the skeletal muscles, motor units of work, development of endurance, muscle tonus in relation to posture, and peripheral circulation as it is related to general physical efficiency.

First Aid for Wounds and Fractures—focuses attention on the need for first aid knowledge and describes proper procedures in caring for injured person until medical aid arrives.

■ COMMONWEALTH PICTURES CORP., 729 Seventh Ave., New York City has obtained exclusive 16mm distribution rights to the RKO serial:

The Last Frontier, written by Courtney Riley Cooper, a thrilling story of the last stand of the Red Man in the days when fighting men like Custer, Wild Bill Hickok and Buffalo Bill roamed the plains. The serial is in 12 episodes and will be released to rental film libraries sometime in February. Schools whose recreational film programs include the use of serials can write to Commonwealth Pictures Corporation for information as to nearest library which will offer the subject for rent.

■ POST PICTURES CORP., 723 Seventh Ave., New York City, has acquired exclusive world-wide distribution rights to Hal Roach pictures which are available for the first time on 16mm sound film. These four will be released during the current season through leading film libraries:

There Goes My Heart—Fredric March and Virginia Bruce in a lively story of a reporter in search of a missing heiress.

Topper Takes a Trip—a fantasy employing amazing camera tricks—with Constance Bennett and Roland Young.

Zenobia—an Oliver Hardy and Harry Langdon comedy with Billie Burke and Alice Brady also in the cast. The title part is played by an elephant.

Captain Fury—Brian Aherne as Australia's Robin Hood who fought for the freedom of his people.

■ BRANDON FILMS, INC., 1600 Broadway, New York City, is releasing a new group of Russian-made war newsreels, cultural shorts, and civilian defense documentaries. The films have English commentary and are one reel each. The following subjects are available for rental and sale:

For Honor, Freedom and Country—views of Russia's forces engaging the enemy; "scorched earth" policy in operation; labor brigades.

Russia's Millions Mobilize—industrial and farming mobilization; guerilla groups; bomb shelter preparation.

Report from Moscow—scenes of metallurgical plants; rush harvest; nurses drilling.

On the Line of Fire—Russian air and artillery forces in action.

The Red Army—Soviet Army, Navy and Air Force in maneuvers and action.

Soviet Woman—women in civilian defense work.

A special *National Defense Bulletin* of motion pictures dealing with the world-wide fight for freedom, is available from Brandon Films. The films listed are dramatic and authentic portrayals of events "Inside Europe," "Inside Germany," and "Inside Asia," in 16mm sound. It also includes a group of "Films from Britain and Soviet Russia."

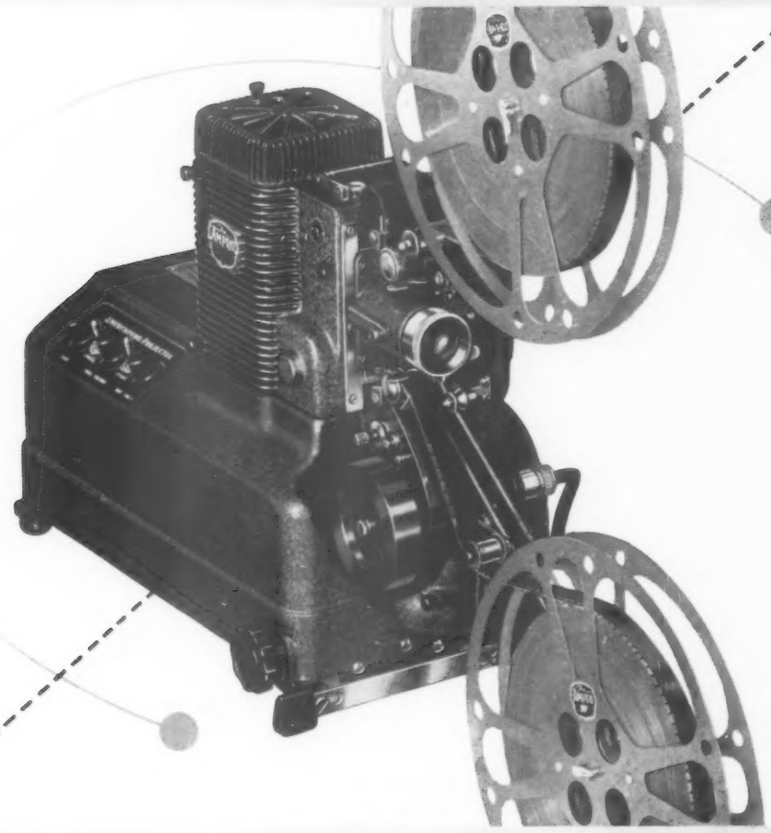
Alert—a reel on basic precautions and procedures for the average citizen—is scheduled for January release by Brandon in cooperation with civilian defense organizations. It was produced by Thomas J. Brandon, in association with Ben Kerner and Julian Roffman.

■ EASTMAN KODAK COMPANY, TEACHING FILMS DIVISION, Rochester, New York, has produced a new teaching film designed for use in high school and agricultural school courses in biology and ornamental horticulture:

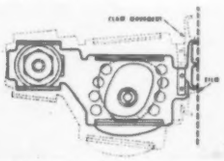
Vegetative Plant Propagation—2 reels, 16mm silent—illustrating the techniques used in various types of vegetative plant propagation, based throughout on scientific findings. The film brings out in full screen close-ups the steps in the processes being studied. Reel 1 demonstrates correct procedures in making soft green and woody stem cuttings; leaf cuttings; fleshy and fibrous root cuttings. Reel 2 shows tip, mound, and aerial layering; separation and division of garden plants such as phlox, dahlia tubers, narcissus and tulip bulbs; top grafting of apple trees, side grafting of evergreens; grafting of apple roots; bud grafting of roses.

A close-up from the Eastman teaching film, "Vegetative Plant Propagation."

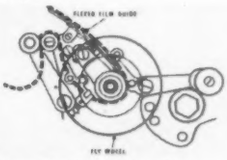
Here's Why AMPRO-SOUND *Gives You* Better Performance



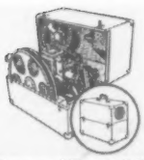
THERE are definite reasons why an ever-increasing number of Ampro 16mm. sound projectors are being selected to aid in the U. S. "Training for Victory" program — in schools, technical colleges, U. S. Army, Navy and aviation forces, government departments, as well as by America's leading industrial concerns. These reasons include:



Triple Claw Movement—The Triple Claw engages three sprocket holes simultaneously which materially lengthens the life of the film. This is of first importance not only from the standpoint of operating costs but affords better reproduction because of improved film condition. One evidence of Ampro's improved film movement is the absence of "film slap" which also contributes to unusually quiet operation.



Natural Sound Reproduction — free from waver and distortion is due to Ampro's finely balanced flywheel and patented "film guides" which control the path of the film to prevent any speed fluctuations or lateral deviations.



Quiet Operation and Portability—The quiet Ampro mechanism of the model illustrated permits operation without blimp enclosure. Packs with reel arms folded for extreme portability. Since there is no sound-proofed case to confine heat, this projector provides extremely cool operation even with 1000 Watt lamp.

And Many Other Features, such as: Tube Operation Approved by Radio Mfr's. Assn. • Flexibly mounted Motor • Direct Light to the Photocell • Underwriters' Approval for 1000 Watt Lamps • All Tubes Convenient for Quick Replacement • Non-Overloading of Amplifier Tubes • Standard Lamps procurable everywhere at no Extra Cost • All Electrical Features Built on one Removable Chassis for Simplified Service • Unusual Ease of Threading • Fast Automatic Rewind • Tubes Carry Oil to all Points from Centralized Oil Cup • Oilite Bearings and Precision Ground Shafts Employed Throughout • Convenient One Hand Tilting Device • Special Threading Light and Pilot Light.

Send for Complete Story

Although the demands of the U. S. War program may make it impossible to fill your requirements immediately—every person interested in better 16mm. projection should get full details of the Ampro story *right now!* The coupon below will bring it to you promptly.

AMPRO

Precision Ciné Equipment

ES142

AMPRO CORPORATION
2851 N. Western Avenue
Chicago, Illinois

Gentlemen: Please send me the complete details on entire line of Ampro "Precision Quality" 16mm. Sound and Silent Projectors.

*Name*_____

*Address*_____

*City*_____ *State*_____

Among the Producers

De Vry Versatile Amplifier

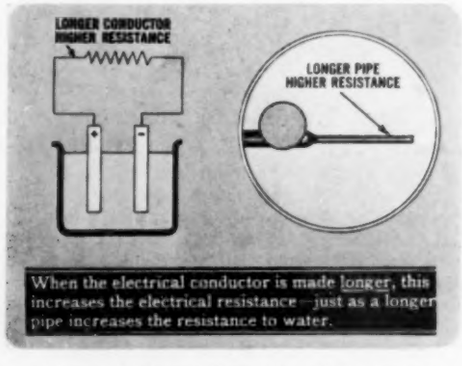
From the DeVry Corporation comes word of a new moderately priced auditorium type 30 watt amplifier, the Model ND 30. This new amplifier, in addition to its use as a motion picture sound reproducing unit, has facilities for use as Public Address System employed in public speaking, sports announcing, commentating, music appreciation, and to provide dance music.

Its versatility is such that with it one can use microphone and phonograph or radio and mix in sound while projecting film; use two microphones and phonograph or radio when using amplifier as Public Address System; equalize volume when using two projectors due to separate volume controls for each machine; regulate both high and low frequency response independently; show silent films with one projector and play music on other projector for musical background while controlling volume.

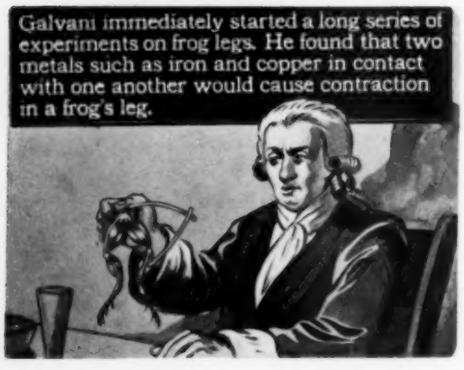
It has a rated flat response from 50 to 10,000 cycles and is said to provide ample volume for audiences of up to 5,000 persons. For further information write to the DeVry Corporation, 1111 Armitage Avenue, Chicago, Illinois.

Electricity Slidefilm Set

An educational slidefilm Kit-set on Electricity, recently released by The Jam Handy Organization, 2821 E. Grand Blvd., Detroit, Michigan, is finding wide use in academic high schools and colleges, technical and vocational schools, and industry to give basic instruction in electricity. This visual instruction tool not only greatly clarifies the subject of electricity to the average understanding but quickens the rate at which the student learns.


LONGER CONDUCTOR
HIGHER RESISTANCE
LONGER PIPE
HIGHER RESISTANCE
When the electrical conductor is made longer, this increases the electrical resistance—just as a longer pipe increases the resistance to water.

Above, A frame from the slide film on "Current Electricity; Below, Some historical data on "The Electric Cell."


Galvani immediately started a long series of experiments on frog legs. He found that two metals such as iron and copper in contact with one another would cause contraction in a frog's leg.

The set is made up of 12 slidefilms dealing with magnetism, static electricity, current electricity, the electric cell, the storage battery, electro-magnetism, the generator, alternating current, electric motors and electric meters. Various applications of electricity in the automobile, in the radio, in the home, and industry are demonstrated in the last two films in the series.

These slidefilms are effective aids for teaching electricity in physics and general science classes as well as in specific electrical courses, providing thorough and factual study of the basic principles of electricity, its history, how it works and its uses.

Hundreds of photographs, diagrams, wash-drawings and cross-sectional views, accompanied by explanatory captions, compose the electrical course. Pictures (frames) are numbered for convenient cross-reference with the lecture and demonstrations. The pictorial course greatly simplifies the instructor's task, and makes it possible, when necessary, to handle larger groups as more students can see the films than can conveniently watch small table top demonstrations.

Educational slidefilms are coming into wider use in schools as a result of the national defense emergency which is giving a tremendous impetus to visual education because it is both effective and time-saving. Automobile mechanical training slidefilms, born of the emergency, are now in use by the United States Army for the training of mechanics for our motorized and mechanized units and by high schools, vocational and technical schools, universities, CCC Camps and apprentice training groups. Pilot Training slidefilms are being used for ground school instruction of pilots in about 175 universities and other centers of aeronautical training. Slidefilms on Bench Work, Good Teaching, and Basic Aircraft Metal Skills have been found valuable, and a Machining Kit-set is in production. Films for Distributive Education and a Sales Management series have just been released, and motion picture series on traffic and industrial safety, automotive mechanics, and popular science are available.

RCA Engineer Cited by SMPE

Glenn L. Dimmick, sound engineering expert at RCA Laboratories, received the Progress Medal of the Society of Motion Picture Engineers at its semi-annual convention in October, in recognition of his outstanding contributions to the advancement of the motion picture art. Dr. Dimmick is the second RCA engineer to be so honored, and follows Walt Disney on the Society's roll of medalists. Recently, he has been engaged, with other members of the RCA research staff, in perfecting a practical commercial means of increasing the efficiency of motion picture camera and projector lenses by coating them with a chemical film which virtually eliminates light reflection.

New G-E Photoflash Lamps

Development of a blue Mazda "mighty midget" Photoflash lamp No. 5 was announced last month at Nela Park by General Electric's lamp department. Need for the new tiny blue flash bulb, Nela photo experts said, has grown out of the widespread use of miniature cameras designed for color photography. The blue No. 5 is, however, also adaptable to use with larger cameras. Color coating on the new blue mighty midget has the same characteristics as that of the familiar G-E Mazda photoflash lamp No. 21B. It has been carefully matched by Eastman Kodak Company to the color characteristics of Daylight Kodachrome. Size and shape of the new G-E No. 5 bulb are identical with the clear No. 5. More than two dozen may be conveniently carried in the coat pockets.

Another G-E development is a blackout photoflash lamp in two models designed to permit the taking of pictures at night without revealing the customary flash to the eye. The smaller flashbulb is called G-E "mighty midget" blackout photoflash lamp No. 5-R. The larger blackout flashbulb, identical in size and shape with the conventional G-E Mazda No. 21 photoflash lamp, will be known as G-E blackout photoflash lamp No. 22-R. Bulb of each blackout photoflash lamp is equipped with a special purplish-black coating. Characteristic of the coating is its ability to screen out visible light yet to let the infra-red, or heat rays, through to flood the subject with invisible radiation. Film, sensitive to infra-red rays, then takes the picture.